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Staff Instruction

Subject: **Guidance on the Use of Risk Indicators in the National Aviation Safety Information Management System**

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1.0 INTRODUCTION

1.1 Purpose

(1) This document is guidance for the use of the risk indicators feature of the National Aviation Safety Information Management System (NASIMS).

1.2 Applicability

(1) This document applies to Transport Canada Civil Aviation (TCCA) headquarters and regional personnel involved in the management or execution of the surveillance portion of our oversight activities.

1.3 Description of Changes

(1) Not applicable.

2.0 REFERENCES AND REQUIREMENTS

2.1 Reference Documents

(1) It is intended that the following reference materials be used in conjunction with this document:

(a) Civil Aviation Directive (CAD) SUR-008 — *Surveillance Policy*;

(b) Staff Instruction (SI) SUR-009 — *National Planning Standards*; and

(c) SI SUR-001 — *Surveillance Procedures*.

2.2 Cancelled Documents

(1) Not applicable.

3.0 BACKGROUND

(1) The National Civil Aviation Management Executive (NCAMX) decision of May 2006 to cancel the National Audit Program, coupled with a further decision in October of 2006 to accept a new surveillance model comprising principally of assessments, program validations and process inspections, necessitated a review of how the frequency and type of oversight is determined.

(2) A working group was tasked with the development of a comprehensive risk indicators program for use in the Civil Aviation Program in May of 2007. To address the recommendations of the working group, a risk indicator feature was added to the NASIMS application. The utility was developed with close consideration of the working group's recommendations and initial testing and validation was conducted during late 2009 and early 2010.

4.0 OVERVIEW

4.1 General

(1) The risk indicators tool is a module of NASIMS that is designed to provide a numerical representation of conditions or changes within an enterprise that have an impact on TCCA's surveillance decision making process. To accomplish this, the tool is designed to provide a quantifiable measure in the form of an enterprise risk score. In order to ensure consistency, this score is generated in an identical fashion for every enterprise and certificate.

(2) The tool is a series of closed-ended questions arranged into ten hazard areas. Each question is responded to with yes, no or unknown. In order to generate a score, each question has been

weighted based on its importance relative to other questions as well as the impact or importance of the question's subject matter. The questions are answered at the certificate level, and rolled up automatically to produce the enterprise risk score. In the case of enterprises with multiple certificates, the final enterprise risk score is generated using only the highest-level response to any given question regardless of certificate. This is intended to prevent opposite responses to the same question in different certificates from cancelling out and artificially reducing the enterprise risk score.

(3) As detailed in Section 7.0 of this Staff Instruction, the risk score can be used as an aid in planning and decision making processes. Surveillance planning and frequencies should be determined through use of the company's safety risk profile, in accordance with SI SUR-009. A safety risk profile includes the risk score, as well as information derived from on-going surveillance activities and other information sources. The risk indicators score alone should not be used to determine surveillance frequencies.

5.0 WHERE TO FIND THE RISK INDICATORS DATABASE

(1) The risk indicators database is a module of the NASIMS. NASIMS can be accessed through the Transport Canada Info applications web portal located at: **http://tcinfo/civilaviation/applications.htm**.

(2) The Risk Indicators module itself is accessible through the NASIMS main menu bar under:

Business Intelligence > Risk Indicators.
Select one of the following components:
Regional risk management;
Enterprise Groups;
Enterprises; or
Certificates.

6.0 USING THE RISK INDICATORS DATABASE

(1) Instructions on how to use the various database functions are available as online help using the "Risk Indicators-Help page" link.

7.0 PROCEDURES

7.1 General

(1) Tombstone information for all Canadian Aviation enterprises is automatically uploaded into the risk tool from the National Aviation Company Information System (NACIS) application. Each certificate associated with an enterprise will have its own subfolder. It is within these subfolders that the hazard areas and questions are answered.

(2) It is important to note that the enterprise risk folders are separated by certificate and not functional areas, therefore it will be necessary for multiple functional specialists to consult in order to respond to questions under some certificates.

(3) Inspectors are responsible to ensure they are familiar with the hazard areas and their associated questions. Where a hazard area is unfamiliar, the inspector should speak with a manager and refer to Appendix A of this SI.

7.2 User Roles

(1) Inspector:

(a) Update risk profiles; and

(b) Add notes.

(2) Regional Coordinator:

(a) Review risk profiles;

(b) Add regional planning date; and

(c) Give access to inspectors of that region.

(3) Application Administrator:

(a) Provide application support and maintenance.

7.3 Baseline

(1) A baseline exercise is carried out when a new certificate is added to the system. The objective of the baseline review is to respond to each of the questions so that an initial risk score can be established. When a new certificate is added to an existing enterprise, currently available data and information can be used to complete the questions. However, in the case of a new enterprise where there may not be any existing data or information, the questions should be answered after completion of certification and/or post-certification activities.

Note:

When a new certificate is added to the system, all question responses are automatically set to "unknown" and the Baseline drop down box is set to "In Progress". It is important to ensure that all questions have been answered and the Baseline status change to "Complete" prior to using the risk score for surveillance planning or day to day risk monitoring.

(2) In order to ensure an accurate representation of risk, the baseline information must be as definitive as possible. It is important that every effort be made to reduce the use of the "unknown" selection. Many of the questions require knowledge of the enterprise that may not be evident as a result of routine surveillance activities and may require the assigned inspector to initiate additional contact with the organization. Appendix A of this SI contains examples of methods and techniques that can be used to gather the required information.

(3) The principal inspectors may have the knowledge and information to complete the baselining. In some cases "unknown" answers may be appropriate. When there is insufficient knowledge and information available, the ADO or TTL may initiate other activities, such as interviews with management/line personnel and process inspections or other oversight tools in accordance with SI SUR-001. In the case of an air operator certificate, completing a baseline exercise normally requires input from several inspectors. The question responses and supporting data are expected to be entered in consultation with all technical specialties (Operations, Maintenance, Cabin Safety, Dangerous Goods).

(4) When all questions have been answered, the Baseline drop down box should be changed to "**Complete**".

7.4 Day to day use of the Risk Indicators Database

(1) Question responses must be updated as new safety intelligence is received. This provides a near real-time risk picture of any given certificate, which is useable to assist with day-to-day or scheduled surveillance decisions.

(2) Maintaining an updated risk score relies on the assigned inspector's continuous monitoring for risk indicators. Inspectors have the most contact with the organizations outside of planned

surveillance. It is critical that principal inspectors monitor the company on a regular basis and are able to identify when the database must be updated.

(3) The primary methods used for this monitoring will be the routine contact of service requests from an enterprise (such as requests for information, submission of documents for approval, applications, etc) and any surveillance activities. Understanding and being involved in the routine activities surrounding the enterprises uniquely position principal inspector(s) to identify any deviations from the norm, possible hazards and the emergence of any trends (such as an increase in exemption requests, or high turnover of key staff). However, these reactive information channels may not be sufficient, and monitoring of other areas such as media reports (through use of the department's website "daily news") and the Civil Aviation Daily Occurrence Reporting System (CADORS) is expected.

7.5 Questions

(1) Each question is posed in a manner that results in "yes" responses increasing the risk score and "no" responses decreasing it. Therefore, it is important to carefully read the questions as some may be posed in a negative or non-intuitive way to accomplish this. A third response of "unknown" is available for situations when there is not enough information to allow a definitive yes or no response. A response of "unknown" has a greater weight associated with it than a "no" response but less than a "yes", this is intended to reflect the risk associated with not having sufficient information to make a decision. Care must be taken in using the unknown response, as its frequent use can artificially drive the risk score higher.

(2) Appendix B of this SI provides additional guidance and clarification on the questions.

7.6 Choosing an Answer

(1) The selection of "yes" or "no" indicates that there is sufficient, credible information to support the response and a supporting note is to be added to the system in accordance with section 7.8 of this SI.

(2) There are two scenarios where the use of the "unknown" selection is appropriate:

(a) During a baseline exercise, if all information-gathering exercises have been utilized and it is still not possible to gather sufficient and credible information to make a definitive response, 'unknown' may be selected.

(b) The second scenario can occur during the ongoing use of the system. If, during day-to-day monitoring, information is received which is possible or probable, but unsubstantiated (i.e. a public or employee complaint, media report, etc), it is appropriate to select "unknown" where the existing response to the relevant question is "no". The purpose of this action is to reflect the increase in risk associated with the information but recognizing that it is unsubstantiated. Some form of follow-up may be needed, see section 8.1 of this SI below for details. A summary of the information received, and any actions taken are to be recorded in a note (see section 7.8 of this SI).

(3) It is important to be aware that the questions have been designed to address risk indicators and are not necessarily linked to regulatory requirements. Therefore, not all questions need to be answered based on regulatory compliance. For example: if a question refers to the existence of a reporting system, the question should be directly answered regardless of whether or not the certificate is required by regulation to implement one.

7.7 Conditional Questions

(1) Some questions are only applicable when one or more of the previous questions in the hazard area have been responded to with a "yes". When the response to these root questions is a "no" the follow-on, conditional questions, become non-applicable and should be answered with a "no" as well. These questions are identified in Appendix B of this SI.

7.8 Recording Supporting Comments

(1) A crucial element of the risk indicators feature of NASIMS is its ability to capture and present the information on which the risk scores are based. After updating responses in any hazard category, the system requires a comment to be entered before the changes can be saved.

(2) The content of the note must be sufficiently detailed to substantiate the changes made to the hazard category.

Example:
"Received a manual amendment from the director of flight operations, it indicates that maintenance contracting services for their 767 have been changed to a company in Africa. This is the third change in contracting for maintenance in the past year, but the first that has been awarded to a foreign contractor."

(3) The above note could result in the following questions being updated (the following is not text typically required in a note, but is presented for illustration purposes).

(a) Questions adjusted:

(i) Is the organization changing contractual obligations on a frequent basis for similar services? (changed to a "yes")

(ii) Is the certificate holder using an increased number of foreign or offshore contractors? (changed to a "yes")

(iii) Does the change in contracting for services negatively affect the operation? (changed to "unknown")

(4) The most recent notes entered in support of question changes are displayed immediately under each Hazard area in the database.

(5) Comments that are not directly related to the change of an answer can be recorded in the Inspector notes section.

8.0 ADDITIONAL ACTIONS

8.1 Following up "Unknown" Responses

(1) If, during the ongoing use of the risk indictor tool, a question is answered "unknown" due to unsubstantiated information a decision must be made concerning when, or if, follow-up would be required to definitively answer the question. Based on the nature of the information received, the potential severity and any other relevant risk indicators, the responsible manager may elect to leave the response at unknown or conduct additional follow-up in order to gather the information required to respond definitively to the question. The follow-up may take the form of additional surveillance, as defined in SI SUR-001, or another form of contact such as those outlined in Appendix A of this SI.

8.2 Following up Transient Indicators

(1) Some of the questions represent transient situations. For example, many of the indicators in *Hazard Component 5 – Change in Scope/Product Line/ Facility* concern changes that cause increased exposure to risk during a period of change. In these situations the responsible manager may choose to gather follow-up information after it is believed the risk level has normalized and return the risk question to its previous state, or leave the indicator as is until review at the next annual validation.

8.3 Following up on Safety Critical Information

(1) The gathering and use of safety intelligence to populate NASIMS may lead to the detection of information that is of a safety critical nature. If an immediate threat to safety is detected or is

determined likely to exist, immediate action shall be taken in accordance with existing procedures.

9.0 USE OF THE RISK SCORE

9.1 Surveillance

(1) The risk score is not designed to be an indication of an enterprise's level of compliance with regulations, nor can it be used as an indicator that an enterprise is safe or unsafe. It does, however, numerically represent conditions or changes associated with an enterprise that have the potential of resulting in safety and/or non-compliance issues arising. Analysis of the risk score can be used by planners and managers (along with other information inputs) for determining the frequency at which enterprises receive surveillance and to assist in resource allocation for those surveillance activities. Analysis of the score may also assist in determining when other surveillance or data gathering exercises may be needed.

(2) The surveillance planning policy, detailed in Civil Aviation Directive (CAD) SUR-008 - *Surveillance Policy* and SI SUR-009 - *National Planning Standard* provides guidance on the setting of surveillance frequencies. The risk score is a key input into that planning and decision making processes. It is critical that the database contents have been appropriately maintained and the accuracy of the database has been validated before being used in the surveillance planning process.

(3) It is important to note that the risk score has not been designed to be used as a standalone input into the development of surveillance plans or frequencies, but as an aid in these planning/decision making processes.

9.2 Risk Score Analysis

(1) There are many variables and potential methods that can be used for analyzing risk scores. The results of analysis, such as the examples below, can be used as part of a broader safety risk profile to assist planners and decision makers.

(2) For example:

(a) **Enterprise Risk Score Trend**: Monitoring the score trend over time (during periods of less than 12 months, such as daily or monthly) could assist in determining when unplanned surveillance activities may be appropriate (e.g. a sudden increase in risk score over short period of time).

(b) **Year over Year Risk Score**: Monitoring the year over year score for an enterprise can assist planners in validating assigned surveillance frequencies (e.g. a score that is rising year over year may indicate the need to increase surveillance frequency, where a dropping score may assist in determining if less frequent surveillance may be appropriate). The annual data point is based on the "Regional Planning Date" set by the Regional Coordinator and is intended to be a representation of the annually validated risk score.

(c) **Certificate Risk Score Trend**: Examining the trend of individual certificates within an enterprise may assist planners with resource allocation for surveillance activities (e.g. if an enterprises risk score trend is rising and analysis identifies that the increased risk is coming from a single certificate).

(d) **Risk Score Comparison**: Comparing the risk score amongst enterprises can assist planners with surveillance resource allocation.

9.3 Accuracy of the Risk Score

(1) The accuracy of the risk score is impacted by the quality of the data used to answer the questions and the number of questions that have been definitively answered. Where a significant portion of the questions have not been answered (indicated by 'unknown'), or there are insufficient details recorded (notes, hazard change records) to support the questions, use of the numerical safety risk profile to assist in surveillance decision making may not be appropriate.

10.0 INFORMATION MANAGEMENT

(1) The risk indicators module of NASIMS is a self contained database. Most information requiring management will be contained within the database itself as part of the system.

(2) When information supporting risk indicators must be recorded outside of the database, an entry referencing the information is to be made in either the question change or inspector notes section, as applicable.

(3) When referencing information stored in Records, Documents, and Information Management System (RDIMS), include the following:

- (a) Title of the document;
- (b) RDIMS reference number; and
- (c) RDIMS version number.

(4) When referencing information contained in other databases, include the following:

- (a) The subject matter of the entry;
- (b) The name of the database;
- (c) The date of the entry; and
- (d) The reference number of the entry (if available), or, sufficient detail to allow the entry to be easily located.

(5) When referencing information contained in a physical file include the following:

- (a) General description of the document with sufficient detail to allow it's identification;
- (b) Date of document (if applicable); and
- (c) The file number.

11.0 DOCUMENT HISTORY

(1) Not applicable.

12.0 CONTACT OFFICE

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Suggestions for amendment to this document are invited, and should be submitted via e-mail at:

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Transport Canada documents or intranet pages mentioned in this document are available upon request through the Contact Office.

APPENDIX A—INFORMATION GATHERING

The table below provides examples of methods that can assist in gathering information necessary to answer NASIMS questions when the inspector doesn't have all the information necessary.

For the purpose of the table below the term "interview" is used in a generic sense and not intended to convey a level of formality. Interview is intended to be interpreted as a means to contact and gather information where needed; this can be done through any medium deemed appropriate (meeting, telephone call, email).

Hazard Categories	**Explanation**	**Examples of methods to obtain information to answer NASIMS questions**
1. Labour Difficulties	Labour issues in an enterprise, such as conflict between employees and managers, unsafe working conditions, changes to salaries or benefits have the potential to impact the organization's ability to conduct a safe operation.	Where this information is not obvious during other forms of contact with the company interviews with management and staff to determine if the organization is experiencing labour conflicts or issues can be utilized. Review of any applicable labour/union websites. Review of any safety assessments carried out by the organization as a result of labour difficulties. Review of the organization's hazard register for related hazards and their associated analysis.
2. Management Practices	Management in any enterprise sets the culture for the certificate holder. How an enterprise is managed has a significant impact on the ability of an organization to operate safely.	Interview appropriate organization manager(s) in order to confirm that managers have a good understanding their responsibilities; determine how supervision works within the organization (this can help to make a determination as to whether the span of control is reasonable or not); and to confirm that managers have been provided adequate authority to carry out their duties. Analysis of company file(s) in order to identify: (i) any records that indicate trends (either positive or negative) concerning how the operation is managed (such as multiple requests for exemptions or deviations for operational purposes). (ii) any trends in oversight, communications or compliance issues that indicate the organization may not be following its own documented policies and/or procedures. (iii) whether the organization's employees have been reporting unresolved unsafe

		practices to Transport Canada and if so did the follow-up to these reports identify whether management was reactive to the situation. If there is insufficient knowledge of company reporting practices, it is acceptable to contact the company in order to gain a general understanding of the reporting process (whether formal or informal) and how management deals with reports. Interviewing a sampling of employees may also be useful in gathering information on reporting.
3. Quality Assurance	Quality assurance (QA) is a key component of a management system and is one of the primary tools used by enterprises to ensure they are compliant with regulations and operating safely.	Analysis of company file(s) in order identify previous oversight records or records pertaining to QA which may indicate the QA program has not identified deficiencies, or the organization is not effectively correcting deficiencies. Interview appropriate organization manager(s) in order to determine if the QA management is involved in recommendations for changes within the organization and/or to obtain an understanding of how the program is managed. Sampling of QA records. Note: Under Subpart 706 of the CARs, an air operator without an AMO will have QA for its maintenance control systems. That QA system is considered a part of the AOC and should be entered under that certificate in the database.
4. Change in scope product line/facility	Changes to an organization's scope of work increases exposure to various risks, and may have impact on the ability of the organization to conduct a safe operation.	Review of company files (manual revisions, company applications, etc.) should indicate any significant changes in this category. Interview company manager responsible for the product/scope/facility in to order to determine details of the change, including reasons. Review of any safety assessments carried out by the organization as a result of these types of changes. Review of the organization's hazard register for related hazards and their associated analysis.
5. Changes in Contracting for goods and/or services	Any changes to the certificate holder's contracting for goods and/or services (contract	Analysis of company file(s) in order to identify: (i) records that indicate whether procedures

	arrangements), and how well the organization oversees its contracts, can significantly affect the safety of its operations. .	and policies for approved contracting are being adhered to (i.e. maintenance contracts); (ii) records that contain information for other forms of contracting that may or may not be approved. (i.e. Fuel services, baggage handling, in-flight catering, temporary employees, data acquisition and analysis, etc) Interview company personnel to gain an understanding of the types of contracting in place, how suppliers are evaluated, how often contracts are renewed, etc. In the case of complex contracting systems, a process inspection may be considered. Review of any safety assessments carried out by the organization as a result of these types of changes. Review of the organization's hazard register for related hazards and their associated analysis.
6. Turn over in personnel	When an organization doesn't have a stable workforce, has difficulty attracting new staff, and/or doesn't have sufficient staff, its ability to conduct a safe operation may be impacted.	Interview with managers responsible for maintenance and/or operational activities to determine if the human resources available are appropriate. If these conversations indicate that there are insufficient resources, or high turn over rates, further clarification on how this affects the rest of the organization's workforce may be sought. Has the company adjusted its workload to address any possible shortfall? Has the company determined why it is having high turnover, or trouble staffing? Etc. Review of the organization's hazard register for related hazards and their associated analysis. Review of any risk assessments the organization has conducted regarding turnover.
7. Change in Key personnel	Key personnel changes can have an impact, positive or negative, on a certificate holder. Loss of staff members who play a leadership role can impact the organization's ability to manage or operate safely.	Analysis of company file(s) in order to identify: (i) records that indicate trends concerning changes in personnel which required acceptance by Transport Canada Civil Aviation (TCCA); (ii) changes in other key personnel;

		(iii) regulatory history. Contact Enforcement Unit to determine if any key personnel have ever been convicted under section 7.3 of the *Aeronautics Act*. Interview with company personnel to determine if any key positions are vacant, and what level of supervision/management occurs at other company locations (if applicable). Review of any safety assessments carried out by the organization as a result of these types of changes. Review of the organization's hazard register for related hazards and their associated analysis.
8. Safety Record	When considered over a period of time, occurrences and other related data provide insight into a certificate holder's response to problems. Appropriate and timely responses in addressing occurrences, as well as a history of proactive performance in this area can have an impact on a certificate holder's safety profile and potential for failures in its systems.	Analysis of company file(s) in order to identify: (i) records pertaining to accidents or incidents; (ii) Civil Aviation Daily Occurrence Reporting System (CADORS) and any follow-up actions taken by Transport Canada or the company; (ii) records of complaints, etc. Interview of company personnel to determine how and if the organization deals with hazards, incidents, accidents.
9. Regulatory Record	An enterprise's compliance history as well as its willingness to correct non-compliances can be indicators of the enterprises ability to conduct safe operations.	Analysis of company file(s) in order to identify: (i) any previous notices of suspension or detection notices; (ii) assessment, inspection records and the types of findings raised. Contact enforcement unit to determine if there have been any charges against the company, their willingness to comply, etc. Enforcement Management System (EMS)
10. Seasonal or Specialized operations/Activities	Seasonal and special operations (such as air shows and heli-logging) and/or operations performed for a determined period of time during a particular season or time of year can affect a certificate holder's safety. Such operations, while limited in nature, require as much or more preparation and attention to	Review of any safety assessments carried out by the organization that reflects specialized or seasonal types of operations. Review of the organization's hazard register for related hazards and their associated analysis.

	the quality and safety of the services provided as regular operations.	

APPENDIX B—QUESTION GUIDANCE

Hazard 1 – Labour Difficulties	**Additional Details**
Question	
1.1 Have there been recent negative changes in salaries, work rules and/or benefits?	"Recent" – Within the past 12 months. "Work Rules" - An accepted principle or instruction that states the way things are, or should be, done and tells you what you are allowed or not allowed to do. Changes in work rules refer to changes such as employee shifts, overtime requirements, reporting structures, field rotations, etc.
1.2 Are workers attempting to organize a union?	
1.3 Is there conflict between two or more unions?	
1.4 Does the certificate holder have any Labour Canada interventions?	Answer 'yes' to this question if it is known that Labour Canada has required the organization to take corrective actions with regard to an incident or compliance with the *Canada Labour Code* (CLC).
1.5 Is the certificate holder experiencing labour-management conflict?	
General notes:	

Hazard 2 – Management Practices	**Additional Details**
Question	
2.1 Does senior management lack an understanding of the activities of the organization for which they are responsible?	"Senior management" refers to the highest levels of management in an organization. They generally set the overall policy and direction of the organization and may or may not include personnel approved or accepted by Transport Canada.
2.2 Does the responsible manager lack knowledge of his/her duties, functions or responsibilities as detailed in the organization's documentation or applicable regulation?	"Responsible manager" means the manager(s) directly responsible for the activities of the subject certificate. This will normally be a Transport Canada approved or accepted position (Person Responsible for Maintenance (PRM), chief pilot, Operations manager)
2.3 Are any of the organization's practices not matching the certificate holder's documented policies and procedures?	
2.4 Are the organization's personnel reporting unresolved unsafe practices to TCCA due to management decisions?	
2.5 Is there a lack of management support for feedback from employees?	
2.6 Does the certificate holder request an unusual number of extensions?	"Unusual" means where the number, or pattern, of extensions suggests an inappropriate use, such as to compensate for poor planning or an inability to respond or comply TCCA requests. Extensions can refer to items like maintenance schedule intervals, corrective action plan submission dates, conditions for reinstatement of certificates as detailed on notices of suspension, etc.

2.7 Are the organization's premises (hangar, offices, workshops) poorly maintained?	
2.8 Is there an indication that span of control/supervision may be insufficient?	
2.9 Is the manager lacking the necessary authority from the Certificate Holder to accomplish his/her duties and responsibilities?	"Manager" means the person(s) directly responsible for the activities of the subject certificate.
General Notes:	

Hazard 3 – Quality Assurance Program	**Additional Details**
Question	
3.1 Is there evidence that the QA program internal audit activity is not identifying deficiencies?	
3.2 Is there evidence that internal audit findings were not analyzed and /or corrective actions were not implemented?	
3.3 Is there evidence that the organization fails to follow up on identified internal audit deficiencies, OR, the organization fails to verify effectivity of their corrective actions?	
3.4 Has there been degradation in the QA program as a result of management change?	
3.5 Is there evidence that incident reporting is not part of their QA program?	
3.6 Is there evidence that assigned quality assurance personnel have not received training with respect to their duties?	
3.7 Is there evidence that the QA management is not actively involved in recommendations for changes within the organization?	
3.8 Is the QA program ineffective?	"Ineffective"— Not producing the results that are wanted.
Definitions:	

Hazard 4 – Change in Scope/Product Line/Facility	**Additional Details**
Question	
4.1 Has the scope or product line been affected as a result of asset acquisitions?	These questions relate to the risks associated with changes within an organization and are transient in nature; Transient meaning the increased risk is only expected during the actual period of change and a period of time thereafter. Respond, or leave the answer as 'yes' if the changes have occurred during a time period extending back to the last scheduled surveillance activity (or, alternatively, the past 12 months) and
4.2 Has the scope or product line been affected as a result of asset disposal?	
4.3 Has the certificate holder added to its product line, scope, or services?	
4.4 Has the certificate holder decreased its product line, scope, or services?	
4.5 Has the certificate holder's base(s) of operation changed in any manner?	

4.6 Does the change in scope involve a variation in the type of product technology, equipment, processes, used by the organization, or services provided?	the change still cannot be considered normal or common-place within the organization. If a question is changed to 'yes' it can be reverted back to 'no' in advance of the annual review when it is apparent that the organisation has mitigated the risks associated with the change and the change can be considered commonplace. Questions 6, 7 and 8 are only applicable if there has been a change in product line, scope, etc. If these questions are not applicable, respond 'no'. When question 6 has been answered 'yes', either question 7 or question 8 (not both) should be answered yes or unknown, as appropriate.
4.7 Does the change in scope or product line increase the complexity of the operation?	
4.8 Does the change in scope or product line have no-effect or decrease the complexity of the operation?	
General Notes: "Assets" - A resource having economic value that an individual or corporation owns or controls. "Scope" - The range or area covered by given activities for which the organization holds TCCA approvals.	

Hazard 5 – Changes in Contracting for Goods and/or Services	**Additional Details**
Question	
5.1 Is the certificate holder exercising insufficient control over its contract arrangements?	
5.2 Is there evidence that the certificate holder does not have an evaluation system for suppliers?	
5.3 Is the organization changing contractual obligations on a frequent basis for similar services?	
5.4 Is the certificate holder using an increased number of foreign or offshore contractors?	
5.5 Has there been an increase in contracting for services?	
5.6 Does the change in contracting for services negatively affect the operation?	This question is only applicable if there has been a change in contracting, if there has not answer 'no'.
Definitions: "Contracting Arrangements" - To enter into or make an agreement with a person outside an organization by contract to undertake or produce.	

Hazard 6 – Turnover in Personnel	**Additional Details**
Question	

6.1 Does the certificate holder have trouble attracting personnel?	Turn-over in personnel includes situations where positions are staffed and vacated at a relatively high rate, as well as situations where positions are eliminated or personnel are laid-off such as in a downsizing exercise.
6.2 Does the certificate holder have trouble retaining personnel?	
6.3 Is the turnover in personnel having a negative effect on the company's TCCA approved operations?	
6.4 Is the turnover in personnel having a negative effect on the existing personnel?	
6.5 Are remaining personnel being required to perform unfamiliar or additional functions?	
6.6 Is the turnover in personnel employee initiated?	
6.7 Is the turnover in personnel management initiated?	
6.8 Is the certificate holder failing to proactively address the turnover in personnel?	
6.9 Has the certificate holder failed to identify the causes of the high turnover?	
General Notes:	

Hazard 7 – Change in Key Personnel	**Additional Details**
Question	
7.1 Have there been any changes in key personnel requiring acceptance by TCCA?	In the past 12 months.
7.2 Did TCCA initiate the change in personnel?	If there has been no change, answer "no"
7.3 Have there been any changes in other key personnel positions?	In the past 12 months.
7.4 Is there a record of the key person requiring acceptance by TCCA ever having been convicted under 7.3 of the *Aeronautics Act*?	
7.5 Does TCCA have a history of providing regulatory counselling to the company's key personnel?	Regulatory counselling does not mean "Oral counselling" from an enforcement perspective; it does mean providing regulatory interpretation and guidance.
7.6 Are there any vacant key personnel positions in the organization?	
7.7 Are there insufficient key personnel at other certificate holder locations?	
General Notes: "Key Personnel" - Key personnel include both those who require Transport Canada approval or acceptance and those personnel who are important to the day to day management of the organization.	

Hazard 8 – Safety Record	**Additional Details**
Question	
8.1 Has there been an accident in the last 12 months?	For an Air Operator certificate, accident refers to the Transportation Safety Board (TSB) definition, which is as follows:

	"An accident resulting directly from the operation of an aircraft, where a person sustains a serious injury or is killed as a result of being on board the aircraft, coming into contact with any part of the aircraft or its contents, or being directly exposed to the jet blast or rotor downwash of the aircraft, the aircraft sustains damage or failure that adversely affects the structural strength, performance or flight characteristics of the aircraft and that requires major repair or replacement of any affected component part, or the aircraft is missing or inaccessible." Ref:http://www.tsb.gc.ca/eng/incidents-occurrence/aviation.asp For non-air operator certificates, this question should be responded to as 'unknown' when an accident has occurred and there are known links between the accident aircraft and the certificate holder and the nature of the link provides for a reasonable possibility of being found to have contributed to the accident (e.g. an Approved Maintenance Organization (AMO) performed maintenance on an aircraft shortly before that aircraft was involved in an accident). The question should be responded to as "yes" if a Minister's Observer or the TSB has indicated that the actions, inactions or other conditions within an organization have contributed to an accident.
8.2 Has there been an incident that has implications about the overall safety management of the certificate holder?	Incident is not limited to the TSB definition, but can be any occurrence or event that interrupts normal procedure and/or results in an unsafe action or condition.
8.3 Do the number and/or nature of CADORS indicate an increase in the company's safety related occurrences?	
8.4 Has there been an increase in reports or complaints regarding this certificate holder?	
8.5 Does the certificate holder have safety related recurring occurrences?	This question refers to similar events which have occurred more then once in the past 3 years, or related events which recur in a manner that suggests an inadequately addressed root cause.
8.6 Are the certificate holder's actions insufficient in dealing with emerging hazards?	Respond 'yes' to this question if accidents, incidents or other safety related events have occurred which should have reasonably been foreseen and prevented by the certificate holder, or, if the certificate holder has not considered and dealt with the risks or hazards associated with changes to the organization or its operations.
8.7 Is there evidence that the certificate holder does not have a corrective action program that includes causal analysis and follow up?	

8.8 Is it evident that the certificate holder does not have an internal safety reporting system?	Answer 'yes' to this question if it is clear there is no safety reporting system in place, or if the safety reporting system seems ineffective (whether such a system is required by regulation or not).
Definitions:	

Hazard 9 – Regulatory Record	**Additional Details**
Question	
9.1 Have there been any detection notices, or Notices of Suspension (any type) issued in the last 24 months?	
9.2 Are there outstanding corrective actions resulting from detection notices or notices of suspension (any type)?	
9.3 Does the Certificate Holder demonstrate unwillingness to comply with requests from the Minister?	
9.4 Does the certificate holder have a record of untimely and/or unacceptable remedial actions?	A **remedial action** is a change made to a nonconforming product or system to address a deficiency. **Untimely** means late or not within what would normally be considered a reasonable or safe timeframe.
9.5 Was the certificate holder's QA system found non-compliant during the last Program Validation Inspection (PVI) or Assessment?	
9.6 Has the organization failed its last assessment?	Failed means being assessed at a score less then 3, but doesn't include situations where a score has been moved from a 2 to 3 in accordance with the provisions of SI SUR-001. If an organization has not yet been assessed, respond 'no'.
9.7 Does the organization have a record of recurring non-conformance with regulatory requirements resulting from audits, program or process validations, etc.?	
9.8 Does the Certificate Holder have any Aviation Occupational Health and Safety (AOSH) violations?	AOHS applies in respect of employees employed on an aircraft while in operation and in respect of persons granted access to such aircraft by the employer.
9.9 Does the Organization have a record of aviation related convictions?	
Definitions:	

Hazard 10 – Seasonal or Specialized Operations/Activities	**Additional Details**
Question	
10.1 Is the base of operation inconsistent from one operating season to the next?	
10.2 Has the equipment and/or facility changed from the previous operating season?	
10.3 Are the employees of the seasonal operation constantly changing?	
10.4 Is the equipment and/or facility inadequate for the operation?	
10.5 Is the equipment and/or facility inadequately maintained during the off-season?	
10.6 Has the organization failed to request changes to its scope of operation prior to the season?	
10.7 Has the organization changed its seasonal, specialized operation or activities without prior approval?	
10.8 Have there been changes to the operating environment that negatively affected the original operation?	
General Notes: Questions in this hazard area can apply to organizations which operate remote bases and/or conduct deployed operations (e.g. forest fire control operations).	