

SMS FOR AERODROMES – BLOCK 7/8

PRACTICAL EXERCISES ACCEPTANCE/REVIEW NON-COMPLIANCE

RDIMS#1469103



Canada

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In this section we take a look at corrective action plans and root cause. This was identified by Canadian inspectors as an area of concern and was often done improperly by SMS aerodrome managers.

Example Scenario

A Process Inspection (PI) was carried out by Transport Canada for each of the following three airport operated by **Company X**:

- **Airport Location 1** on March 5, 2018
- **Airport Location 2** on March 12, 2018
- **Airport Location 3** on March 19, 2018

As a certificate holder offering airport services under 302 of the Canadian Aviation Regulations (CARs), **Company X** is required to comply with these regulatory requirements on an ongoing basis. To that end, the purpose of the PIs was to verify that **Company X** was in compliance and has the systems in place to ensure ongoing compliance with regulatory requirements.

Example Scenario continued...

The scope included an evaluation of the following area of Company X's operation: **TP312** – Airfield Inspection

These PIs were conducted in accordance with the procedures specified in *Transport Canada Civil Aviation Staff Instruction (SI) SUR-001 – Surveillance Procedures, Issue 6*. The methodology used to establish the level of compliance to the CARs is based on: Understanding the company's organization and operations systems, sampling (e.g. records, facilities, personnel, etc.) to verify that the system(s) as documented are effectively ensuring ongoing compliance, and an analysis of observations to identify areas of non-compliance, develop findings, and take further action if appropriate.

Example Scenario continued...

During the PIs, non-compliances were found in the following areas:

- Airport Operations Manual
- Airfield Maintenance

A total of eight findings are attached to this report. They are classified as follows:

Finding #	Minor	Moderate	Major
2018-302.07-01 Airport Location #1	X		
2018-302.07-02 Airport Location #1			X
2018-302.08-01 Airport Location #1	X		
2018-302.07-01 Airport Location #2	X		
2018-302.07-02 Airport Location #2			X
2018-302.08-01 Airport Location #2	X		
2018-302.07-02 Airport Location #3			X
2018-302.08-01 Airport Location #3	X		

Example Scenario continued...

Company X must submit a CAP to address all by June 13, 2018.

Please send your CAP and all supporting materials to the attention of the Inspector at the address enclosed. Please reference ATS No. 12345678 on your submission and note only one type of submission (mail or email is required).

Transport Canada will conduct a follow-up action to determine whether the implementation of the CAP measures have resulted in the necessary corrections to ensure ongoing compliance. Details concerning CAP requirements can be found in *Advisory Circular SUR-002 Root Cause Analysis and Corrective Action for TCCA Findings*.

Your cooperation during the surveillance activity was appreciated.

SIGNATURE

Technical Team Lead

Transport Canada

Finding Form pg 1

Transport Canada / Transports Canada		FINDING FORM	
Company Name	[REDACTED] Airport	Finding Number	2018- [REDACTED]
Date Location	[REDACTED]	Date	[REDACTED]
System of Process of Interest (Optional)			
Airport Operations Manual			
Non-Compliance With Canadian Aviation Regulation 302.28(1)			
<input type="radio"/> violation <input checked="" type="radio"/> non-adherence			
302.28 Airport Operations Manual... (3) The operator of an airport shall operate the airport in accordance with the airport operations manual.			
Example: For CIP-01 Daily Visual Inspection reports were not available for the following dates - April 4, 2017, April 5, 2017, May 3, 2017			
Additional Public Required by:			
Case (optional)	Title	<input checked="" type="checkbox"/> On The Approved Certificate Action Plan.	
Non-Compliance Manager (P of A or Authorized) Or Head of Inspector (Person Inspection of Individual Finding)	Date Issued/4th		2018-04-18

28-0000 (2016-06) Canada

Corrective Action Form Pg 2

CORRECTIVE ACTION FORM PART 1 - PAGE 2	
Short-Term Corrective Actions The following short term corrective action has or will be actioned as indicated below in the time line section: 1. Sampling of OARMs has been requested by the Safety and Risk Control Manager to the Airport Manager of [REDACTED] to verify that the OARPs is completed and submitted each morning, Monday to Friday. The Regional Airport Manager is responsible to check and report if any OARPs are not submitted and action according.	
Long-Term Corrective Actions (including an assessment of any related hazards or risks associated in the implementation of the corrective actions) The following long term corrective action shall be or will be actioned as indicated in the time line section: 1. With respect to new workers, Monthly Safety Meetings have been implemented effective February 2018. This meeting is an opportunity for new workers to bring forward their concerns or if they need refresher or additional training. As well, RAMOs are responsible to follow up with the new workers to check if roles and responsibilities are manageable. This topic will be brought up for discussion at the next RAMM meeting scheduled in July 2018 with the Manager of Airport Operations taking the lead.	
Timeline for Implementation of all Corrective Actions 1. Short term corrective actions shall be completed by July 13, 2018. 2. Long term corrective actions shall be completed by September 13, 2018.	
Integral Approval Name/Signature [REDACTED] Director of [REDACTED]	Date/Time/00 2018-06-12

Risk Assessment Guide Pg 1

Risk Assessment Guide		
ATTACH TO ACCIDENT, INCIDENT OR HAZARD INVESTIGATION REPORT		
A. ACCIDENT / INCIDENT DETAILS		
Date of the Accident / Incident (Calendar) : 03/01/17		File # Number: 2016-000-0041
Description (provide a copy of findings, incident or Hazard Report Form 100576):		
Findings: Airport Operations Manual: • For CAT, all Daily visual inspection reports were not available for the following dates – April 4, 2017, April 5, 2017, May 3, 2017		
Injured Person(s) Name(s):		
Witnesses:		
Name:	Phone Number:	Available? <input type="checkbox"/> Yes <input type="checkbox"/> No
•	•	<input type="checkbox"/> Yes <input type="checkbox"/> No
•	•	<input type="checkbox"/> Yes <input type="checkbox"/> No
•	•	<input type="checkbox"/> Yes <input type="checkbox"/> No
•	•	<input type="checkbox"/> Yes <input type="checkbox"/> No
•	•	<input type="checkbox"/> Yes <input type="checkbox"/> No
Property Damage?		
<input type="checkbox"/> Damage to aircraft by airport equipment	<input type="checkbox"/> Damage to moving aircraft	<input type="checkbox"/> Damage to vehicles
<input type="checkbox"/> Damage to equipment	<input type="checkbox"/> Damage to property / facilities	<input type="checkbox"/> Damage to wildlife
<input type="checkbox"/> Other:		
B. CAUSAL FACTORS		
Mark each factor with a "Yes" or "No", or "Not Applicable". In most instances, a "Yes" answer requires an explanation. In some other cases, a "Yes" answer requires an explanation, and this is shown.		
CAUSE		
1. Was the task adequately described in the existing documentation (e.g., JTB, order list and crew control plan)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment:
2. Were the work procedures adequate to ensure safe operations (e.g., not too complex, not involving unreasonable, impossible conditions)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment:
3. Were the tasks clear from conflict with other directions or instructions?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment:
4. Was the person conducting the work not asked for available help to do the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment:
5. Had the person been trained properly and understood the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment: view any type
6. Did the person follow standard practices in conducting the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment: describe existing practice
7. Were any existing practices / practices being observed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment: describe existing practice
8. Was there adequate time to conduct the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment: being a time constraint - justify it
9. Did the person coordinate and communicate properly with people involved in the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment: How would it be different had they not been communicating to the AFDG?
10. Other (specify):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	If No, comment:
Provide additional details on how any of these factors may have led to the accident / incident.		

Risk Assessment Guide Pg 2

EQUIPMENT / MATERIALS RIA

1. Did any equipment / vehicle contribute to the accident / incident? Yes No N/A NA NA F 'This, provide explanation.

2. Did the location / condition of the equipment / vehicle contribute to the accident / incident? Yes No N/A NA NA F 'This, provide explanation.

3. Did the design / quality of the equipment contribute to the accident / incident? Yes No N/A NA NA F 'This, provide explanation.

4. Were the tools and materials appropriate for the existing procedures (e.g., not too complex, reliable)? Yes No N/A NA NA F 'Not, comment.

5. Was the equipment / vehicle in safe working order? Yes No N/A NA NA F 'Not, comment.

6. Was the correct equipment / vehicle being used for the task? Yes No N/A NA NA F 'Not, comment.

7. Was the equipment / vehicle used correctly? Yes No N/A NA NA F 'Not, comment.

8. Were there proper instructions in the use of the equipment / vehicle? Yes No N/A NA NA F 'Not, comment.

9. Other (describe): Yes No N/A NA NA F 'Not, comment.

Provide additional details on how any of these factors may have led to the accident / incident:

ENVIRONMENT - Were any of the following factors present during the time leading to the accident / incident or at the time of the accident / incident (check all that apply)? (N/A - potentially yes if there was snow)

1. High noise levels Yes No N/A NA NA F 'This, explain.

2. Handover / task mishearing Yes No N/A NA NA F 'This, explain.

3. Poor ventilation Yes No N/A NA NA F 'This, explain.

4. Heat Yes No N/A NA NA F 'This, explain.

5. Humidity Yes No N/A NA NA F 'This, explain.

6. Cold Yes No N/A NA NA F 'This, explain.

7. Poor visibility Yes No N/A NA NA F 'This, explain.

8. Rain or snow Yes No N/A NA NA F 'This, explain.

9. Fog Yes No N/A NA NA F 'This, explain.

10. Wind Yes No N/A NA NA F 'This, explain.

11. Inadequate lighting Yes No N/A NA NA F 'This, explain.

12. Distraction / distractions (e.g., cell phone use) Yes No N/A NA NA F 'This, explain.

13. Other (describe): Yes No N/A NA NA F 'This, explain.

Provide additional details on how any of these factors may have led to the accident / incident:

PERSONNEL (HUMAN FACTORS)

Were any of the following factors a possible contributor to accident/incident or at the time of the accident / incident (check all that apply)?

1. Employee's physical (e.g., strength, stamina, sight, hearing) and/or mental condition Yes No N/A NA NA F 'This, explain.

2. Employee fatigue Yes No N/A NA NA F 'This, explain.

3. Complacency, inattention or boredom Yes No N/A NA NA F 'This, explain.

4. Significant job changes Yes No N/A NA NA F 'This, explain.

5. Recent work, or work schedule Yes No N/A NA NA F 'This, explain.

6. Training X Yes No N/A NA NA F 'This, explain. Particularly yes if new worker, APW away.

7. Qualifications X Yes No N/A NA NA F 'This, explain. Particularly yes if new worker, APW away.

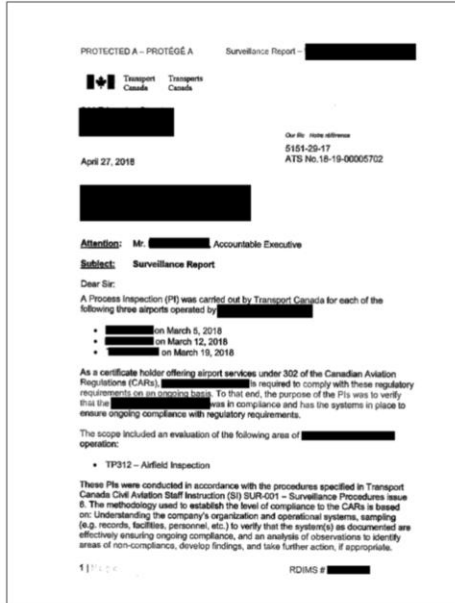
8. Alcohol / drug medication Yes No N/A NA NA F 'This, explain.

9. Time pressure X Yes No N/A NA NA F 'This, explain. Particularly yes with APW away.

10. Other (describe): Yes No N/A NA NA F 'This, explain.

Provide additional details on how any of these factors may have led to the accident / incident:

Original Documents



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CAP EVALUATION EXERCISE

- Explain the finding
- Review what the enterprise submitted for CAP
- Review of CAP Evaluation Check Sheet
- Group completion of CAP Evaluation Check Sheet

CAP EVALUATION CHECKLIST - Image

A	B	C	D	E	F
PNR CAP EVALUATION CHECKLIST					
1	ENTERPRISE:		MEETS		As referenced in AC SUR-004 v1, section 12.2 - CAP Evaluation See also AC SUR-002 - Root Cause Analysis and Corrective Action for TCCA Findings
2	FILE NUMBER:		REQUIREMENTS		
3	SURVEILLANCE ACTIVITY:				
4	FINDING #:				
5	Cap Submission # (1, 2, 3, etc.):				
CORRECTIVE ACTION PLAN REQUIREMENTS					
7	A) FACTUAL REVIEW OF THE FINDING (SUR-004 section 12.2.1)		YES	NO	COMMENTS
8	The enterprise shall complete a review of the finding and clearly identify what happened, how widespread it was, where it occurred in the enterprise's system and what type of problem it was.				
9					
10					
11	a. a description of the relevant factual information related to the finding				
12	b. identification of the system(s) or portion thereof that led to the finding				
13	c. identification of the process, procedure, practice and/or culture(s) involved				
14	B) ROOT CAUSE ANALYSIS (SUR-004 section 12.2.2)				
15	The enterprise shall provide the root cause analysis as well as any causal factors that contributed to the finding.				
16	a. identify the process used, how they logically arrived at root cause				
17	b. other considerations used in the conduct of the root cause analysis				
18	c. did they consider the 'system' involved in the finding?				
19	i. input of the people involved with the system in question				
20	ii. processes, procedures, forms, templates, training etc. associated with the system(s)				
21	iii. performance data/history associated with the system(s) identified				
22	C) PROPOSED CORRECTIVE ACTIONS (SUR-004 section 12.2.3)				
23	The enterprise shall provide corrective actions (both long and short term) to mitigate the identified root causes.				
24	a. detailed description of the short term action(s) to address the specific examples in the finding as well as the review to determine if other examples exist.				
25					
26	b. detailed description of the long term actions to prevent re-occurrence of the non-compliance				
27	c. identify the person responsible for implementing the actions				
28	d. an assessment of any induced hazards or risks associated with implementing the CAP				
29	D) IMPLEMENTATION TIMELINE (SUR-004 section 12.2.4)				
30	a. Does the CAP include timelines for the implementation of each proposed corrective action?				
31	b. Is the timeline aimed at implementing effective corrective actions in the shortest reasonable time period?				
32					
33	Inspector SHALL confirm there are due dates, targets and planned follow up to ensure effectiveness of the proposed CAP				
34	E) MANAGERIAL APPROVAL (SUR-004 section 12.2.5)				
35	Is the corrective action plan approved by an individual within the certificate holder's management structure who has the authority to commit the necessary resources required to fulfill the plan?				
36					
37	CAP Manager:				
38	Date (Y/M/D):				
39					
40	RDMS #000 v1 - xx Feb 2017				

CAP EVALUATION CHECKLIST – Excel File

PNR CAP EVALUATION CHECKLIST			
ENTERPRISE:		MEETS REQUIREMENTS	As referenced in AC SUR-004 v1, section 12 See also AC SUR-002 - Root Cause Analysis Findings
FILE NUMBER:			
SURVEILLANCE ACTIVITY:		YES	NO
FINDING #:			
Cap Submission # (1, 2, 3, etc.):		COMMENTS	
CORRECTIVE ACTION PLAN REQUIREMENTS			
A)	FACTUAL REVIEW OF THE FINDING (SUR-004 section 12.2.1)		
	The enterprise shall complete a review of the finding and clearly identify what happened, how widespread it was, where it occurred in the enterprise's system and what type of problem it was.		
	a a description of the relevant factual information related to the finding		
	b identification of the system(s) or portion thereof that led to the finding		
	c identification of the process, procedure, practice and/or culture(s) involved		
B)	ROOT CAUSE ANALYSIS (SUR-004 section 12.2.2)		
	The enterprise shall provide the root cause analysis as well as any causal factors that contributed to the finding.		
	a identify the process used, how they logically arrived at root cause		
	b other considerations used in the conduct of the root cause analysis		
	c i did they consider the system involved in the finding?		
	ii input of the people involved with the system in question		
	iii processes, procedures, forms, templates, training etc associated with the system(s)		
	iv performance data/history associated with the systems identified		
C)	PROPOSED CORRECTIVE ACTIONS (SUR-004 section 12.2.3)		
	The enterprise shall provide corrective actions (both long and short term) to mitigate the identified root causes.		
	a detailed description of the short-term action(s) to address the specific examples in the finding as well as the review to determine if other examples exist.		
	b detailed description of the long term actions to prevent re-occurrence of the non-compliance		
	c identify the person responsible for implementing the actions		
	d an assessment of any induced hazards or risks associated with implementing the CAP		
D)	IMPLEMENTATION TIMELINE (SUR-004 section 12.2.4)		
	a Does the CAP include timelines for the implementation of each proposed corrective action?		
	b Is the timeline aimed at implementing effective corrective actions in the shortest reasonable time period?		
	c Inspector SHALL confirm there are due dates, targets and planned follow up to ensure effectiveness of the proposed CAP		

Airport Runway 34 Lighting
As assessed by Accredited Standards

The configuration of [redacted] having 'Twinway' (T) feed into the runway from behind the threshold via the paved runway strip end (left pad) of runway 34 is a very unique instance that is not repeated anywhere in Canada to our knowledge. This configuration is so unique that none of our Canadian motorcycle standards, or ICAD Volume 1, addresses the specific needs with respect to visual aids requirements. Our concern is heightened by the fact that there is a significant drop in ground elevation immediately after the pavement and ending at a public road.

In consideration of the above, we have reviewed the submission and make the following recommendations:

- 1) The submission mentions that the threshold lights will consist of 3 main and 1 elevated light in each group. This would satisfy the standard requirement for threshold lights and therefore the wing bars are not required. That being said, the environmental conditions [redacted] may be such that the elevated wingbar lights provide significant operational benefit, especially during winter conditions when the frost lights could be obscured with parked snow. If the airport operator wants the retention of wingbar lights, IATA would support a request for a standard configuration of wingbar lights with the full 25AAR threshold lights etc installed. Also, in considering the overall environmental situation we recommend that the wingbars include 3 runway end lights in each group.
- 2) The end of the paved area prior to the threshold of runway 34 is to be provided with 8 unidirectional red lights (runway end type) evenly spaced across the end.
- 3) The light #103 located on the lower edge of the plan midway between the threshold and pavement and is to be a red unidirectional light facing down the runway.
- 4) The light # 103 located at the top right where the taxiway joins the paved runway strip end is to be provided with double bases.
- 5) The double bases # 101 and # 102 located at the top left near the threshold are not required in accordance with 5.3.17.6 since this area is prior to the runway. Their proximity to the threshold grass will render the double bases operationally useless since the 2 candle blues will be washed out by the 10 000 candle green.
- 6) The paved portion prior to the threshold of runway 34 is not to be considered as part of the LDA, TODR and ASDR declared distances for runway 34 due to the absence of a graded runway strip end beyond the pavement end.

With respect to the mechanism to document these requirements, we are of the opinion that these can be captured as a certificate condition to be listed on page 2 of the airport certificate as outlined in 5.10.101. It is to be noted that this 5 is currently under review and should be updated on the website before calendar year end.

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End of Module Confirmation

- Group questions
- Further discussion & reflection