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Asked by: Mr. John Main, Arviat North-Whale Cove

Asked of: Hon. David Akeeagok

Number: Question 47 – 5(2)

Date: June 6, 2019

Subject: Nunavut Airports   **Translations to Follow**

Question:

1) How many quality assurance audits of Nunavut airport facilities and operations were conducted between April 1, 2016 and March 31, 2019?

2) What were the results of each quality assurance audit?

3) What was the process undertaken for each quality assurance audit?

4) What expenditures were undertaken in relation to each quality assurance audit?

5) What quality assurance audits of Nunavut airport facilities and operations are planned to be conducted between April 1, 2019 and March 31, 2021?

6) What specific training and qualifications are required by Transport Canada for an individual to be deemed qualified to conduct an airport quality assurance audit?

7) As of April 1, 2019, how many employees of the Government of Nunavut have been deemed qualified to conduct an airport quality assurance audit?

8) Between April 1, 2016 and March 31, 2019, what work was conducted on behalf of the Government of Nunavut by the Winnipeg Airport Services Corporation?

9) Between April 1, 2016 and March 31, 2019, what expenditures were incurred by the Government of Nunavut in relation to work conducted by the Winnipeg Airport Services Corporation?

10) As of April 1, 2019, what safety management systems are in place at each airport in Nunavut and how are they delivered?

Response:

I am pleased to provide the information you requested on the Nunavut Airports Divisions' Safety Management System (SMS) and their Quality Assurance (QA) process.

The Safety Management System, including the Quality Assurance Program, is a critical element in providing safe airports for Nunavummiut.

Implementing this system in Nunavut airports has proven challenging, as it has in many other airports and air operations in Canada. Despite the challenges, we remain committed to developing a robust SMS as the best way to ensure safety, safety culture, and continuous improvement over the long term.

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1)   Quality assurance audits of Nunavut airport facilities and operations conducted between April 1, 2016 and March 31, 2019

- Audits in 2016: 0

- Audits in 2017: 4 (Clyde River, Igloolik, Cape Dorset, Hall Beach)

- Audits in 2018: 10 (Pond Inlet, Resolute Bay, Pangnirtung, Qikiqtarjuaq, Cambridge Bay, Kugluktuk, Kugaaruk, Baker Lake, Arviat, Whale Cove)

- Audits in 2019: 10 (planned and underway: Arctic Bay, Grise Fiord, Kimmirut, Sanikiluaq, Gjoa Haven, Taloyoak, Chesterfield Inlet, Rankin Inlet, Naujaat, Coral Harbour)

2)   Results of quality assurance audits

The findings from the audits conducted in 2017 demonstrated a high level of consistency in the documentation aspects, with several identical findings found in each airport audited.

Following review of the results of those audits, the Airport Operations Manuals (AOMs), including Operator Obligations; Emergency Response Plans (ERPs); Wildlife Management Plans; and Winter Maintenance Plans for all airports were reviewed and revised. Consequently, the QA audits conducted in 2018 were focused more narrowly on TP312E *Aerodrome Standards and Recommended Practices* compliance.

The tables are organized as follows:

This first section demonstrates that there were 3 Regulatory findings (REG), 0 Non-Conformances (NCF), and 1 Observation (OBS) found in the Airport Operations Manual (AOM), and that 6% of the findings

found onsite were related to the Airport Operations Manual. The bottom row contains the same information for the Emergency Response Plan (ERP).

Regulatory Program	REG	NCF	OBS	Total	%
AOM	3	0	1	4	6%
ERP	0	0	1	1	2%

The second section demonstrates that 2 of the areas of concern were related to the AOM itself, and 2 were related to processes that either ought to have been detailed in the document, or were detailed incorrectly. The ERP had one issue with the document.

Regulatory Program	Document	Process	Total	%
AOM	2	2	4	6%
ERP	1	0	1	2%

Table 1-1
Clyde River Airport – Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total	%
AOM	3	0	1	4	6%
ERP	0	0	1	1	2%
Operator Obligations	2	4	0	6	10%
Wildlife	11	3	5	19	31%
Winter Maintenance	0	11	8	19	31%
TP312 Airfield	11	0	2	13	21%
Total	27	18	17	62	
%	44%	29%	27%		

Table 1-2
Clyde River Airport – Findings Type Summary

Regulatory Program	Document	Process	Total	%
AOM	2	2	4	6%
ERP	1	0	1	2%
Operator Obligations	6	0	6	10%
Wildlife	17	2	19	31%
Winter Maintenance	18	1	19	31%
TP312 Airfield	9	4	13	21%
Total	53	9	62	
%	85%	15%		

Table 2-1
Cape Dorset Airport – Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total	%
AOM	2	0	1	3	5%
ERP	0	0	1	1	2%
Operator Obligations	2	4	0	6	10%
Wildlife	11	2	5	18	29%
Winter Maintenance	0	12	7	19	30%
TP312 Airfield	11	3	2	16	25%
Total	26	21	16	63	
%	41%	33%	25%		

Table 2-2
Cape Dorset Airport – Findings Type Summary

Regulatory Program	Document	Process	Total	%
AOM	2	1	3	4%
ERP	1	0	1	2%
Operator Obligations	6	0	6	9%
Wildlife	16	2	18	28%
Winter Maintenance	18	1	19	29%
TP312 Airfield	9	7	18	28%
Total	52	11	63	
%	83%	17%		

Table 3-1
Igloolik Airport – Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total	%
AOM	3	0	1	4	6%
ERP	0	0	1	1	2%
Operator Obligations	2	4	0	6	9%
Wildlife	11	3	5	19	29%
Winter Maintenance	0	12	7	19	29%
TP312 Airfield	11	4	2	17	26%
Total	27	25	14	66	
%	41%	35%	24%		

Table 3-2
Igloolik Airport – Findings Type Summary

Regulatory Program	Document	Process	Total	%
AOM	2	2	4	6%
ERP	1	0	1	2%
Operator Obligations	6	0	6	10%
Wildlife	17	2	19	31%
Winter Maintenance	18	1	19	31%
TP312 Airfield	8	9	17	21%
Total	52	14	66	
%	79%	21%		

Table 4-1
Hall Beach Airport – Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total	%
AOM	2	0	1	3	5%
ERP	0	0	1	1	2%
Operator Obligations	2	4	0	6	9%
Wildlife	11	2	5	18	28%
Winter Maintenance	0	12	7	19	29%
TP312 Airfield	12	4	2	18	26%
Total	27	22	14	65	
%	42%	34%	25%		

Table 4-2
Hall Beach Airport – Findings Type Summary

Regulatory Program	Document	Process	Total	%
AOM	2	1	3	5%
ERP	1	0	1	2%
Operator Obligations	6	0	6	9%
Wildlife	16	2	18	28%
Winter Maintenance	18	1	19	29%
TP312 Airfield	10	8	18	28%
Total	52	14	65	
%	82%	18%		

Table 5-1

Baker Lake Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	9	0	6	15
Percentage	60%	0%	40%	

Table 5-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	4	11	15
Percentage	27%	73%	

Table 6-1

Cambridge Bay Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	12	0	7	19
Percentage	63%	0%	37%	

Table 6-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	6	16	19
Percentage	32%	68%	

Table 7-1

Kugluktuk Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	10	0	6	16
Percentage	63%	0%	37%	

Table 7-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	6	10	16
Percentage	37%	63%	

Table 8-1

Arviat Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	8	0	4	12
Percentage	67%	0%	33%	

Table 8-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	5	7	12
Percentage	42%	58%	

Table 9-1

Pond Inlet Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	17	1	7	25
Percentage	68%	4%	28%	

Table 9-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	8	17	25
Percentage	32%	68%	

Table 10-1

Kimmirut Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	17	0	6	23
Percentage	74%	0%	26%	

Table 10-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	8	15	23
Percentage	35%	65%	

Table 11-1

Resolute Bay Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	6	3	4	13
Percentage	46%	23%	31%	

Table 11-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	6	7	13
Percentage	46%	54%	

Table 12-1

Qikiqtarjuaq Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	15	3	8	26
Percentage	58%	11%	31%	

Table 12-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	10	16	26
Percentage	38%	62%	

Table 13-1

Whale Cove Overall Findings Summary

Regulatory Program	REG	NCF	OBS	Total
TP312 Airfield	13	1	4	18
Percentage	72%	6%	22%	

Table 13-2

Findings Type Summary

Regulatory Program	Document	Process	Total
TP312 Airfield	7	11	18
Percentage	39%	61%	

Table 14-1 Pangnirtung Airport Overall Findings Summary				
Regulatory Program	**REG**	**NCF**	**OBS**	**Total**
TP312 Airfield	14	2	5	21
Percentage	67%	9%	24%	

Table 14-2 Findings Type Summary			
Regulatory Program	Document	Process	Total
TP312 Airfield	8	13	21
Percentage	38%	62%	

3)   Process undertaken for each quality assurance audit

Audits were undertaken on site by the Lead Auditor, accompanied by one or two other WASCO auditors, and assisted by one or more Nunavut Airports Division staff members. In the interests of efficiency, several audits were combined into a trip, and coordinated with a charter. Certain elements of the audits were also undertaken at the Nunavut Airports Headquarters in Rankin Inlet.

Auditors developed a work-plan for each site prior to conducting their visit. The audits were conducted in accordance with processes set out in Transport Canada Advisory Circular AC SUR 004 (Civil Aviation Surveillance Program, and included reviews of all documentation required for the airport certification; interviews with staff engaged in operating the airport; and sampling of the mandatory element s of the airport facility in reference to the Canadian Aviation Regulations and the applicable Standards (TP312E).

Documentation reviewed included the following (regulated*) elements:

- Training Records *
- Airport Operations Manual *
- Airport Wildlife Management Plan *
- Winter Maintenance Plan *
- Emergency Response Plan *
- Obligations of the Operator*
- Building Evacuation Signage
- Airfield Inspection Repots
- ATB Inspection Reports
- Surface Condition Reports*
- (A)PAPI Inspections*
- Vehicle Inspections

4) Expenditures undertaken in relation to each quality assurance audit

The expenditures for WASCO's work on the audits were part of their overall contract to deliver SMS and QA services; the totals for each of 2016-17, 2017-18, and 2018-19 are detailed in the answer to Question 9.

There were costs incurred by GN staff for travel and accommodations; however, site visits and inspections are routine requirements of airport operations, and the audits were coordinated around normal activities.

Several of the audits in 2018 were undertaken with charter flights. The cost of those flights is as follows:

$	8,277.83
$	30,756.50

5) Planned Quality Assurance audits of Nunavut airport facilities and operations, to be conducted between April 1, 2019 and March 31, 2021

Ten audits are planned, completed or underway in 2019. These audits are being completed in the following communities: Arctic Bay, Grise Fiord, Kimmirut, Sanikiluaq, Gjoa Haven, Taloyoak, Chesterfield Inlet, Rankin Inlet, Naujaat, and Coral Harbour.

6) Specific training and qualifications required by Transport Canada for an individual to be deemed qualified to conduct an airport quality assurance audit

Transport Canada does not specify the qualifications for an airport quality assurance auditor. The aviation regulations stipulate that the size, nature and complexity of the SMS system must be scaled to the size, nature and complexity of the aeronautical operation, and to the hazards and risks associated with it.

The onus is on the operator to ensure that the personnel undertaking Quality Assurance audits "have the knowledge, experience and personal suitability to undertake QA tasks and that they have been provided with audit training such as the TC Audit Procedures Course or with industry courses such as the ISO Lead Auditors Course, the Canadian Standards Association or the International Air Transport Association (IATA) Audit Course." *(Transport Canada Advisory Circular No. 107-001)

7) Government of Nunavut employees deemed qualified to conduct an airport quality assurance audit as of April 1, 2019

The Government of Nunavut does not have any staff qualified to undertake formal Quality Assurance audits of our airports. In accordance with the Canadian Aviation Regulations, Quality Assurance audits must be undertaken by third parties who are not engaged in the tasks or activities of operating the airports being audited.

Airports Division staff participate in the audits to the maximum extent possible, and are expected to use some of the same methodology in conducting their own inspections of the airports. The Regional Transportation Program Managers, Transportation Program Officers, and Headquarters Operation and

Standards staff are expected to engage in the audit process. At present 7 staff members are familiar with these processes.

8) Work conducted on behalf of the Government of Nunavut by the Winnipeg Airport Services Corporation between April 1, 2016 and March 31, 2019

The Government of Nunavut has one major contract with the Winnipeg Airport Services Corporation (WASCO) to deliver and manage a compliant Safety Management System (SMS) and Quality Assurance Program (QAP) in accordance with the Canadian Aviation Regulations, Transport Canada requirements, and industry best practices.

In addition to the above contract, WASCO has provided on-site technical advisory services to assist the division through a change in management, and on occasion has provided specialized airport electrical services in response to Transport Canada findings and system failures.

9) Expenditures incurred by the Government of Nunavut in relation to work conducted by the Winnipeg Airport Services Corporation between April 1, 2016 and March 31, 2019

Our records show that the following payments were made to WASCO between those dates:

FY16-17	$ 7,500.00
FY17-18	$ 611,259.61
FY18-19	$ 628,846.31
Total	$1,247,605.92

10) Safety management systems in place at each Nunavut airport as of April 1, 2019 and how they are delivered

All Nunavut Airports, with the exception of the Iqaluit Airport, operate under a single Safety Management System reporting to a single Accountable Executive – the Deputy Minister of EDT.

The primary purpose of an airport is to provide a safe environment for aircraft movements, and airports have always taken a systematic approach to managing safety. Regulations, standards, regulatory plans, publications, circulars, bulletins and directives have always governed every aspect of airport design, construction, and operations; as they have governed aircraft design and certification, aircraft maintenance, aircraft fueling, approach design, flight, navigation, weather and communications, and virtually any other discipline associated with the movement of aircraft.

Since 2009, all Airports certified under the Canadian Aviation Regulations have been required to have a Safety Management System (SMS) in place. Under an SMS, in addition to meeting compliance with all of the above requirements, the operator must also have a system to proactively seek out, identify, assess, mitigate, and track all hazards particular to its own operation. The SMS is meant to function as a reminder of good operating practices; a check on the application of those practices; an analytical tool to improve those practices; and a warning system to the Accountable Executive if the practices are not working due to human or other factors.

In a complex system, such as the Nunavut Airports System, the SMS operates best if it has some independence from the airport operators. There must be certainty that a hazard, once identified, will either be mitigated or elevated to the attention of the Accountable Executive.

In order for the SMS to operate properly, the reporting of hazards must be encouraged. All reporting must be non-punitive, and all reports must be recorded, assessed, and mitigated as required prior to closure. A registry and status of all reported hazards and outcomes is maintained, and risk profiles and safety objectives are developed in response to the hazards that are identified in the operation.

All staff involved in delivering airport services are trained in SMS. At a minimum, this training involves review of the Safety Policy, SMS awareness and reporting requirements, and human organizational factors.

The Nunavut Airports Division Director, the Manager of Standards and Program Development, the regional Transportation Program Managers, and the Transportation Program Officers are all required to have additional training and knowledge in Safety Management Systems, and are all members of the SMS Committee required by regulations.

This Committee is chaired by the SMS Manager, an employee of WASCO, who presents quarterly and annual SMS reports to the Accountable Executive. The SMS Manager is also required to identify and escalate any issues of concern that occur outside the meeting schedule.