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SAFETY RECOMMENDATIONS

REQUIRES IMMEDIATE ACTION

ALERT # SI-17-001943

TO: Captain Charles Beneby - Director BCAA

CC: Mrs. Glenys Hanna-Martin Minister MOTA

Mrs. Lorraine Armbrister – PS MOTA

Mrs. Juliea Brathwaite-Rolle – Manager Standards Oversight

Captain Donald Barrett – POI Western Air Limited

DATE: April 25, 2017

PURPOSE: Aircraft Accident Update

In accordance with Annex 13 to the Convention on International Civil Aviation, Aircraft Accident and Incident Investigation, International Standards and Recommended Practices, Chapter 6, Paragraph 6.8 and the Bahamas Civil Aviation (Investigations of Accident and incidents Investigations) Regulations 14 (3), ***"At any stage of the investigation of an accident or incident, the accident or incident investigation authority of the State conducting the investigation shall recommend to the appropriate authorities, including those in other States, any preventive action that it considers necessary to be taken promptly to enhance aviation safety."***

In light of the above, the following has been uncovered during the investigation of the accident involving aircraft C6-HBW, which occurred on February 7th, 2017 at Freeport, Grand Bahama, Bahamas.

The findings outlined in this report are provided to allow the BCAA to conduct an internal investigation of its policies and practices and to institute procedures and policies to ensure what has been uncovered never happens again. While the complete content outlined here will not be included in the Final report, a brief summary must be included, as what was uncovered during the course of this investigation are factual and relative to the understanding of what occurred. It is the hope of the AAID that the BCAA will move swiftly to put stringent policies in place, as it's failure to provide adequate oversight, though not a direct cause of this accident, is a contributing factor none-the-less.

Information uncovered:
Post analysis of flight crew training information and training facility approval information gathered in the investigation of the accident involving C6-HBW the AAID have uncovered a number of issues that need to be addressed urgently by the BCAA.

Summary Report that will be included in the Final Report

The AAID have uncovered that;

1. The training facility CAE Center Stockholm Sweden was not approved in accordance with BCAA guidelines.
2. Adequate oversight was not provided by the BCAA of the training being conducted at the Training Facility CAE Center Stockholm Sweden. BCAA failed to ensure operator was conducting adequate training using appropriate training curriculum. *(The operator was allowed to use a training program for an aircraft not in their fleet).*
3. The captain of C6-HBW was not qualified in accordance with Bahamas Civil Aviation Safety Regulations (BASR).

In respect of item 1, the training facility was not approved in accordance with BCAA guidelines, the AAID have uncovered that;

- The inspector assigned to conduct the facility and simulator inspection for approval, did not conduct the inspection as per BCAA guidelines outlined in Chapter 27, Training Inspections and Chapter 28, Flight Training Simulator Devices, of the Operations Inspector Manual.

- No documentation / letter of the parameters of approval was issued to the operator as required by Chapter 28 (28.3.2(c)) of the Operations Inspector Manual.

- From interview with the inspector that conducted the facility inspection and approval, he stated that he was assigned to conduct an evaluation of a facility for approval, however, he was not given written instructions by the Principal Operations Inspector (POI) for Western Air Limited, (on whose behalf the inspections were being conducted) of the parameters of his requested inspection. Nonetheless, the Operations Inspection Manual is clear on the requirements and directions to be followed in order that a training facility can be approved. No evidence, though requested, was provided to this investigation team by the approving inspector or previous manager of the unit, to substantiate that the evaluation and approval was done in accordance with BCAA guidance previously stated in Chapters 27 and 28 of BCAA Operations Inspector Manual.

- Procedures again, were not followed in the approval of the facility as per Chapter 28. Prior to launch for evaluation, all documentation should have been provided by the operator to the BCAA and evaluated by the inspector to ensure that the simulator meets the requirements of the type of aircraft in the fleet of the operator. CAE Centre Stockholm Sweden has approval to provide training on the SF340B type aircraft. All aircraft in the fleet of the operator are SF340A type aircraft. A difference document should have been evaluated showing the differences between the A and B model simulator and aircraft. However, if the facility was authorized to provide Model A type training, there should have been an approval issued by the Swedish Authority stating that approval, hence no difference document or difference training program would then be required. All documents provided to the accident investigation team were for approval of the SF340B simulator / aircraft. Request for information referencing the A Model Approval was required of the inspector that approved the facility, to date, no approval for the Model A simulator was provided. In this regard the facility should not have been approved until the requirements of Chapter 28 were satisfied.

- Both POI and Manager of the unit at the time should have confirmed all approvals were granted in accordance with Operations Inspector Manual and operator was approved to use the correct facility and simulator for training of its crew. This did not occur as the facility was approved, with specific approval for the SF-340B aircraft, an aircraft that the operator does not have in its fleet.

Conclusions in respect of item 1
As per Section 1, it is evident that;

- An unqualified and unprepared inspector was assigned the critical task of evaluation and approval of an Aviation Training Organization.

- No additional audit of documents and processes were conducted by the BCAA upon the return of the assigned inspector, to validate the process of approval conducted by this inspector prior to issuing this facility and the operator approval to conduct critical flight training.

Recommendation in respect of item 1

The AAID recommends the BCAA ensure;

- A qualified inspector conducts all evaluation and approvals of training facilities in the future.
- All assignments of duties by a POI to anyone acting on his/her behalf are clearly documented and communicated to the assigned inspector.
- All inspector assigned duties are fully aware and knowledgeable of the functions they are assigned and required to perform.
- A full report of actions carried out when assigned, is documented and communicated back to the POI.
- An audit is carried out by the POI (or some other assigned person), of any evaluations for approvals prior to it being submitted to the manager for approval.

In respect of item 2, adequate oversight was not provided by the BCAA of the training being conducted at the Training Facility CAE Center Stockholm Sweden, as well as the approval process following evaluation, the AAID have uncovered that;

- A Training in Progress Job Aid (OP-010) was used in evaluation of the facility and training in progress that occurred. This document should not have been completed in its entirety as the inspector was not present for the training that occurred and did not observe several areas that he annotated as satisfactory namely sections 3, 4, 5, 6, 7, 8 and 11.

- Statement of Compliance Document required as part of a simulator evaluation process, were not provided in the evidence requested to demonstrate how the simulator and facility was approved. All of these documents and others required by Chapter 28 of the Operations Inspector Manual should have been collected and presented to the POI upon satisfactory evaluation for his review and report to the Manager for final approval of the facility. None of these documents were made available to the investigation team, though all documents demonstrating the evaluation and approval process were requested.

- Evaluate Simulator Training and Checking Job Aid OP-022 was used and here again this document was completed by the inspector, which required physical presence and observation when no observation was actually conducted as required by sections16, 17 and 18 of the job aid.

- As no BCAA inspector was present at the training center, as there should have been, to conduct a Training in Progress evaluation of a newly proposed facility, the operator conducted training, which should not have been allowed. The inspector's presence should have been there to validate whether the simulator met the requirements to fulfill the mandate of the operator's training program, as the operator was operating under a "dry lease agreement" where their own instructors were conducting training and checking. No evidence was provided to substantiate whether the operators check and training personnel received adequate training on the use and parameters of

the simulator by the training facility. From evidence reviewed the operator conducted a "Difference training" when they should have conducted an initial training with this captain. As previously addressed in a safety recommendation of April 24, 2017, a difference training program is a reduced training curriculum given to crew who operate one particular aircraft type and now will transition to a different aircraft type of the same variant type of aircraft. *(Example, training between the SF340A vs SF 340B models / BE1900C vs BE1900 D).* Investigation uncovered that the operator only operate the SF340A aircraft and therefore should not be approved to also train on the SF340B model as the aircraft is not part of the company fleet.

- The operator previously applied for approval to add the variant aircraft type SF340B to their certificate, hence the interim approval of the "difference training program" to their approved training manual. As the addition of the aircraft never materialized, this "difference program" should have been cancelled. Successive assigned POIs over the years have failed to remove this approval from the operator's approved training program.

Conclusions in respect of item 2

- Again evidence demonstrates that the process of evaluation and approval was not done in accordance with BCAA guidance.

- Inspector conducting evaluation was not present for the training yet he completed assignments that clearly required presence at the training.

- Inappropriate training curriculum was used to conduct training.

- No evidence provided to demonstrate whether the operator's personnel received training on the simulator operation and functions.

Recommendation in respect of item 2

- It is the recommendation of the AAID that not only this inspector, but also all inspectors of the BCAA be given recurrent training and demonstration of the correct method to complete job aids be reinforced. *(You cannot mark an item satisfactory if you were not present to observe it).*

- Difference training program for the operator should be cancelled, as they have no aircraft in fleet of this type.

In respect of item 3, the captain of C6-HBW was not qualified in accordance with Bahamas Civil Aviation Safety Regulations (BASR), Investigation also uncovered:

- That this pilot was recently hired by Western Air Limited from an operator where he flew primarily the SF340B aircraft and now was training to fly the SF340A aircraft which is the only aircraft type in the fleet of Western Air Limited. Additionally, this pilot should have been trained using an initial flight and ground training curriculum, as he was a new employee of Western Air Limited. Instead he was trained using the reduced training curriculum (difference).

- The authority (BCAA) after review and evaluation of "credit for previous training document" and other supporting documents submitted by an operator, can grant a reduction in flight and ground training requirements, if the operator can satisfactorily prove the applicant has indeed completed a full training program with the previous operator. In such instance the onus is on the

approving inspector to compare the differences in both operator's training program, Standard Operating Practices (SOP), profiles and hourly requirements, before approving a reduction in training waiver for the applicant. However, a review of the Operator file, managed by the authority (BCAA), did not reveal any such document requesting reduction in programmed training hours nor any grant of waiver for a reduction for this applicant, therefore an initial training curriculum should have been used.

- Investigations also revealed that the captain should not have been recommended by the training captain for a proficiency check nor should a proficiency check been allowed based on the following;
    - The captain did not complete the required hours of flight and ground training required for an initial training program.
    - No waiver for reduced training was issued (none was found in the operator's file).
    - On the second simulator ride there were four items annotated as unsatisfactory and requiring further training.
    - No evidence was provided to show where this additional training occurred. As the failures requiring further training occurred on the second simulator ride, there should have been a third or subsequent simulator ride showing retraining and successful accomplishment of the previously failed tasks.
    - The training captain on the same document showing failure and requiring additional training signed the applicant's file as satisfactory and recommended him for the proficiency check. This is unacceptable and a third or more simulator sessions should have been documented, as well as a new form should have been prepared to show adequate retraining and recommendation for the proficiency check.

Recommendation Proposed:
Based on information uncovered, the following safety recommendation(s) are being advanced:

- The BCAA should ensure that any reduction in training granted in respect of any training curriculum is fully documented in the Operator file.

- The BCAA should ensure that this applicant undergoes a full initial training curriculum in the SF340A model aircraft, as his actions and responses were questionable and his system knowledge was inadequate. This may be in part due to the reduced training he received, which is directly attributable to the lack of systems knowledge which have been determined to be a contributing factor in the cause of this accident.

- This difference training can create confusion especially during periods of heightened stress such as an emergency, especially as the crew does not fly the B model aircraft at all, yet they use it for training. This confusion is evidently contributing in the cause of this accident.

- BCAA should re-evaluate the authority given to the operator to conduct their own training and checking. Additionally, BCAA should ensure that any individual providing checking on its behalf is fully aware of the requirements for such checking. Once a review of the training document was provided to the checking personnel, he should have known the individual did not meet the requirements. Based on the documents provided, it was evident that areas were failed during training and no supporting evidence provided to verify that a retraining occurred.

Overall, it is the conclusion of the investigation team that the accident was directly attributable to pilot / crew unfamiliarity with aircraft systems on this type aircraft, as in the case of the captain, his previous experience was on the SF340B aircraft and now he was in command on the SF340A aircraft where systems and procedures were somewhat different from what he was previously used to. Receipt of insufficient training on this variant aircraft cannot be ruled out as a contributing factor also.

Also, previously addressed to the BCAA, was that the co-location of both SF340A and SF340B Quick Reference Handbook should be disapproved. The manufacturers stated they disapproved of this method as well. During heightened and stressful situation such as an emergency, it is easy for a crew to misread and misdiagnose a situation when options from both model aircraft are presented, usually on the same page. As in the case of this accident, the captain did in fact use the inappropriate QRH response to meet the requirement of the abnormal condition he was faced with. His unfamiliarity with the aircraft systems exacerbated an abnormal condition and escalated it to an emergency situation. The AAID believes that had the captain been more proficient on this aircraft type and had the abnormal condition been dealt with adequately and in a timely manner, the outcome of this situation could have been quite different.

As the operator does not have the SF340B model aircraft in its fleet, any reference to it should be removed from its training manuals, curriculums, check lists and quick reference handbooks to avoid any confusions. Additionally, the operator should not be allowed to conduct training in a B model simulator and then conduct a difference training in the A model. They should only be allowed to train in the simulator for the model of aircraft in their fleet.

Please note: In accordance with Civil Aviation (Investigations of Accident and Incidents) Regulations 14 (4) (a), (bi), (bii) and (c) An undertaking or authority to which a safety recommendation is communicated pursuant to paragraph (1) shall, without delay —

(a) take the safety recommendation into consideration and, where appropriate, act upon it;

(b) send to the Chief Investigator one of the following —

(i) full details of the measures, if any, it has taken or proposes to take to implement the recommendation without delay and, where it proposes to implement measures, the timetable for securing that implementation;

(ii) a full explanation as to why the recommendation is not to be the subject of measures to be taken to implement it; and

(c) give written notice to the Chief Investigator where at any time information provided to him pursuant to sub-paragraph (b)(i), concerning the measures it proposes to take or the timetable for securing their implementation, is rendered inaccurate by any change of circumstances.