



**MINISTRY OF TRANSPORT,
CONSTRUCTION AND MARITIME ECONOMY**



STATE COMMISSION ON AIRCRAFT ACCIDENT INVESTIGATION

FINAL REPORT
Serious Incident, No: 127/12
Runway Incursion
on 15 February 2012
Warsaw Chopin Airport (EPWA)

This report is a document presenting the position of the State Commission on Aircraft Accident Investigation concerning circumstances of the air occurrence, its causes and safety recommendations. The report is the result of the investigation carried out in accordance with the applicable domestic and international legal provisions for prevention purposes only. The investigation was conducted without the need of application of the legal evidential procedure.

In connection with the provisions of the Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (EU Journal of Laws L. 2010.295.35), the wording used in this report may not be considered as an indication of the person guilty or responsible for the occurrence.

The Commission does not apportion blame or liability.

In connection with the above, any form of use of this report for any purpose other than air accidents and serious incidents prevention, can lead to wrong conclusions and interpretations. This report was drawn up in the Polish language. Other language versions may be drawn up for information purposes only.

Warsaw 2012

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GENERAL INFORMATION

Type and model of aircraft : **MD 82 airplane**

Aircraft registration marks : **LN-RLF**

Aircraft commander : **ATPL(A)**

Flight organizer : **SAS Scandinavian Airlines**

Aircraft user : **SAS Scandinavian Airlines**

Aircraft owner : **Lack of data**

Place of the occurrence : **Warsaw Chopin Airport (EPWA)**

Date and time of the occurrence: **15 February 2012, 08:36 hrs UTC**

Damage to the aircraft : **No damage**

Injuries to persons : **None**

SYNOPSIS

Note: all times in the Report are expressed in UTC (LMT = UTC + 1 hour)

During approach to the RWY 11 the MD 82 flight crew performing a flight from EPCH to EPWA received from air traffic controller an order to abandon the approach due to the presence of the " Operation Winter (Snow removing)" (OW) vehicle on the runway. After go-around procedure the airplane safely landed at the aerodrome.

Investigation of the occurrence was conducted by:

MSc (Eng.) Bogdan Fydrych - Member of the State Commission on Aircraft Accident Investigation.

Based on analysis of the audio and video recordings, Report No 43 of the meeting of the Team on Security on the Runways at Warsaw Chopin Airport and collected documents the Investigator determined the following **causes of the serious incident**:

1. Failure by the OW vehicle driver to receive the radio communication directed to him.
2. Misinterpretation of the situation on runways by the OW vehicle driver - the loss of situational awareness.

Contributing factor:

Splitting the OW vehicles column.

Having completed the investigation SCAAI proposed six safety recommendations.

1. FACTUAL INFORMATION.

1.1. History of the incident

On the day of the occurrence the activities related to "Operation Winter" (OW), consisted of RWY15/33 cleaning, which was performed by 8 sets. Due to inaccurate surface cleaning in the vicinity of the RWY11/29 axis, an extra pass by two sets was necessary while the other vehicles continued RWY15/33 cleaning mowing towards THR 15. After completing the additional passage the OW vehicles vacated the runways intersection on RWY15/33 from THR33 side and after turning back they stopped facing the intersection. One of the vehicles failed to stop at a safe distance but crossed RWY11/29, which necessitated abandoning of the approach procedure to RWY11 performed by the flight crew of MD82 airplane. The manager of OW and TWR several times called the driver to immediately stop the vehicle short of RWY11/29.

1.2. Injuries to persons.

None.

1.3. Damage to aircraft.

None.

1.4. Other damage.

None.

1.5. Personnel information.

1. TWR personnel had the required qualifications and ratings to perform the flight duties.
2. The driver of the vehicle had the required qualifications and ratings to perform operations on the maneuvering area of the aerodrome.

1.6. Aircraft information.

The airplane had the required documents to perform flights.

1.7. Meteorological information.

ATIS information:

UTC TIME	Message content:
2012.02.15 08:30:30	* THIS IS WARSAW INFORMATION WHISKY * OBSERVATION AT 08: 30 EXPECT N ARRIVALS RUNWAY 11 I-L-S. APPROACH * RUNWAY 11 WET * COVERED WET SNOW 25 PERCENT 86 * FRICTION COEFFICIENT 67 85 86 * DEPARTURES RUNWAY 11 TRANSITION LEVEL 90 QAN 150 DEGR 13 KT VARI 110 AND 170 DEGR QBA 800 M RVR 15 1000 M NO CHANGE RVR 11 1100 M NO CHANGE QNY MODERATE SNOW QNY LOW DRIFTING SNOW QNY MIST QBB BKN 800 FT QMU - 5 / - 5 QNH 984 TREND NOT AVAILABLE IF MIST APPROACH CONTINUE RUNWAY HEADING CLIMB 3000 FEET AFTER DEPARTURE CONTACT APPROACH 128 DECIMAL 8 * YOU HAVE RECEIVED INFORMATION WHISKY
2012.02.15 08:31:25	* THIS IS WARSAW INFORMATION X-RAY * OBSERVATION AT 08: 31 EXPECT N ARRIVALS RUNWAY 11 I-L-S. APPROACH RUNWAY 11 WET * COVERED WET SNOW 25 PERCENT FRICTION COEFFICIENT 67 85 86 DEPARTURES RUNWAY 11 TRANSITION LEVEL 90

State Commission on Aircraft Accident Investigation
Runway Incursion on 15 February 2012, EPWA.

UTC TIME	Message content:
	<p>QAN 150 DEGR 13 KT VARI 110 AND 170 DEGR QBA 800 M RVR 15 1000 M NO CHANGE RVR 11 1100 M NO CHANGE QNY MODERATE SNOW QNY LOW DRIFTING SNOW QNY MIST QBB BKN 800 FT QMU - 5 / - 5 QNH 984 TREND NOT AVAILABLE IF MIST APPROACH CONTINUE RUNWAY HEADING CLIMB 3000 FEET AFTER DEPARTURE CONTACT APPROACH 128 DECIMAL 8 * YOU HAVE RECEIVED INFORMATION X-RAY</p>
2012.02.15 08:35:35	<p>* THIS IS WARSAW INFORMATION YANKEE * OBSERVATION AT 08: 35 EXPECT N ARRIVALS RUNWAY 11 I-L-S. APPROACH RUNWAY 11 WET COVERED WET SNOW 25 PERCENT FRICTION COEFFICIENT 67 85 86 DEPARTURES RUNWAY 11 TRANSITION LEVEL 90 QAN 150 DEGR 13 KT * QBA 1000 M * RVR 11 1200 M INCREASING * RVR 15 VARI 1000 AND 1400 M INCREASING QNY MODERATE SNOW QNY LOW DRIFTING SNOW QNY MIST QBB BKN 800 FT * QMU - 4 / - 5 QNH 984 TREND NOT AVAILABLE IF MIST APPROACH CONTINUE RUNWAY HEADING CLIMB 3000 FEET AFTER DEPARTURE CONTACT APPROACH 128 DECIMAL 8 * YOU HAVE RECEIVED INFORMATION YANKEE</p>

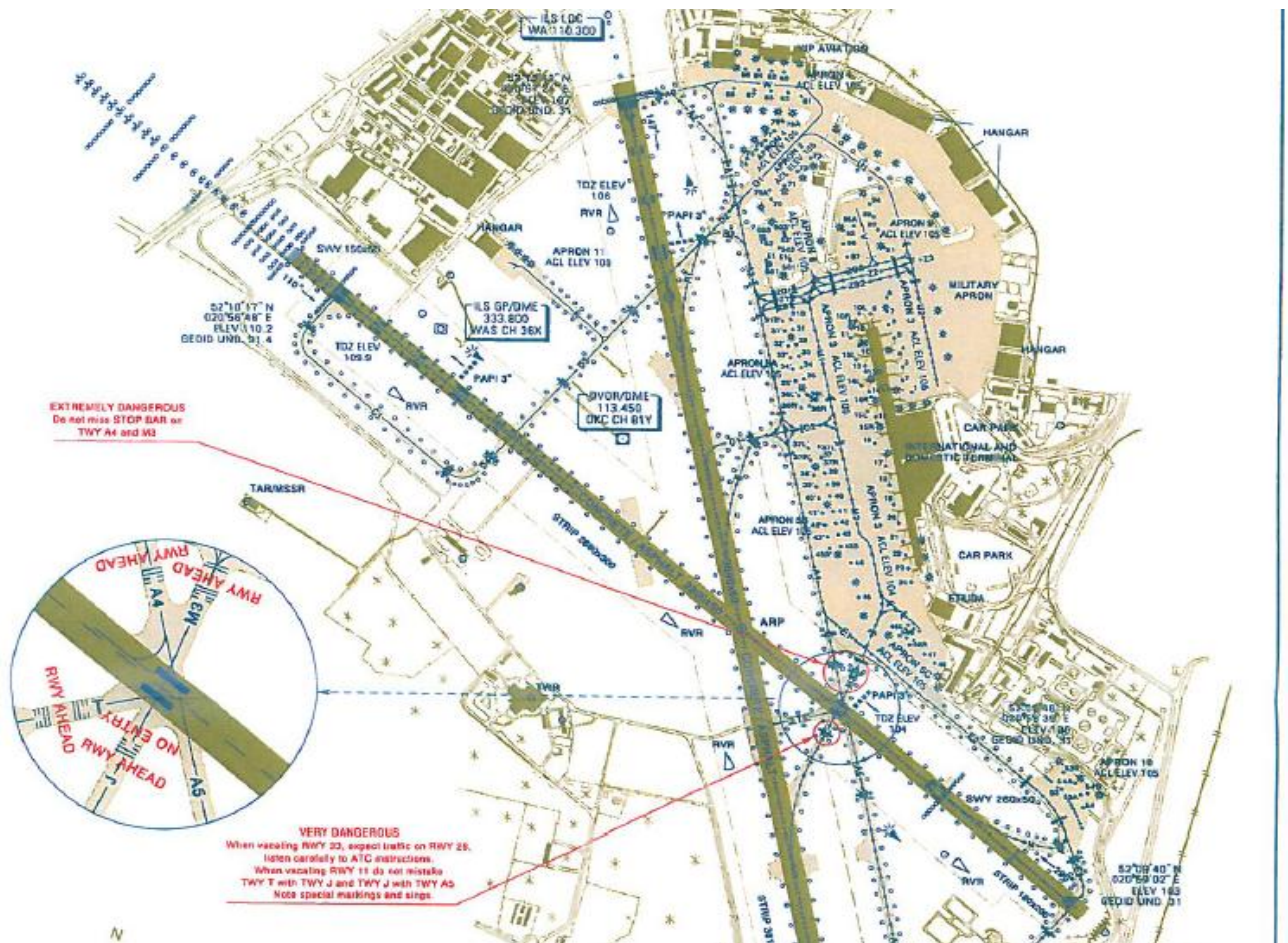
1.8. Aids to navigation.

Not applicable.

1.9. Communications.

During the occurrence the radio communication with the airplane crew and persons on the runways was maintained.

1.10. EPWA aerodrome information.



1.11. Flight recorders.

None.

1.12. Wreckage and impact information.

Not applicable.

1.13. Medical and pathological information.

Not applicable.

1.14. Fire.

Fire did not occur.

1.15. Survival aspects.

Not applicable.

1.16. Tests and research.

The Investigator analyzed the audio and video recordings of the occurrence and the available documentation.

1.17. Organizational and management information.

SCAAI was informed about the occurrence by:

Airport Duty Officer (on 15 February 2012); and

Polish Air Navigation Services Agency (on 16 February 2012).

1.18. Additional information.

The occurrence was initially classified as an incident and the management of the airport was appointed as the investigating entity. However, upon receipt of the Report No 43 of the meeting of the Team on Security on the Runways at Warsaw Chopin Airport and after acquaintance of the Commission with the course of the occurrence its classification was changed for Serious Incident - "Runway Incursion" to be investigated by the SCAAI.

1.19. Useful or effective investigation techniques.

Traditional investigation techniques were used.

2. ANALYSIS.

2.1. Occurrence analysis.

On the day of the occurrence the activities related to "Operation Winter" (OW), consisted of RWY15/33 cleaning, which was performed by 8 sets. Due to inaccurate surface cleaning in the vicinity of the RWY11/29 axis, an extra pass by two sets was necessary while the other vehicles continued RWY15/33 cleaning mowing towards THR 15.

After completing the additional passage the OW vehicles vacated the runways intersection on RWY15/33 from THR33 side and after turning back they stopped facing the intersection. One of the vehicles failed to stop at a safe distance but crossed RWY11/29, which necessitated abandoning of the approach procedure to RWY11 performed by the flight crew of MD82 airplane. The manager of OW and TWR several times called the driver to immediately stop the vehicle short of RWY11/29.

The driver of the vehicle which crossed the RWY11/29 stated that he had not heard the radio messages addressed to him and having seen the OW vehicles arrangement in front of the intersection assumed that it was done for him to let him pass through the intersection and join the other vehicles which were moving towards the THR15. The first radio communication he heard in the area of the TWY "O1".

The Air Traffic Controller on duty at the time of the accident stated that the additional passage of the runways intersection undertaken by the vehicle driver was of critical importance to the incident occurrence since the time of the passage had not been taken into account in the existing at that time traffic situation (airplane approaching RWY11).

The cleaning works on runways carried out under time pressure are activities that adversely affect the flight safety. In the investigated case a better solution would have been passing information to TWR that due to contamination there was a need for longer occupation of the runways intersection. This would allow the Controller to analyze the feasibility of

landing in the existing situation and probably the airplane would have been directed to go around.

In addition, any object located on a runway surface, including e.g. caked snow should be treated as FOD and reported to TWR personnel who consequently should suspend the flight operations until the runway in question has been cleaned.

The factor contributing to the occurrence was splitting the OW vehicles column.

2.2. Evacuation action.

Not applicable.

3. CONCLUSIONS

3.1. Commission findings.

1. TWR personnel had the required qualifications and ratings to perform the flight duties.
2. The driver of the vehicle had the required qualifications and ratings to perform operations on the maneuvering area of the aerodrome.
3. From the safety point of view early directing of an approaching airplane to go-around is a better solution than performance of the cleaning works on a runway in a hurry.
4. Any object located on a runway surface, including e.g. caked snow should be treated as FOD and reported to TWR personnel who consequently should suspend the flight operations.

3.2. Causes of the serious incident:

1. Failure by the OW vehicle driver to receive the radio communication directed to him.
2. Misinterpretation of the situation on runways by the OW vehicle driver - the loss of situational awareness.

Contributing factor:

Splitting the OW vehicles column.

4. SAFETY RECOMMENDATIONS*

Polish Air Navigation Services Agency :

1. Forward the Final Report and materials related to the occurrence in order to familiarize EPWA TWR personnel with the circumstances of the occurrence.
2. Forward materials related to the occurrence to the Aviation Training Centre of the Polish Air Navigation Services Agency for use during trainings.

Airport Management:

3. Avoid splitting OW column in the course of works on a runway.

4. Consider creation of an additional radio channel dedicated exclusively for OW vehicles working on the aerodrome maneuvering area.
5. Analyze performance of the radio equipment in the area of RWY15/33 from TWY "J" to TWY "O1" for interference preventing communication.
6. Remind personnel involved in the OW operations of the need to inform the TWR personnel when a part of the runway is occupied for a longer period than originally planned.

THE END

SCAAI Investigator-in-Charge

signature

**Note: In accordance with Article 18 par. 1 of the Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC the addressee of a safety recommendation shall inform the State Commission on Aircraft Accident Investigation within 90 days of the receipt of that letter, of the actions taken or under consideration, and where appropriate, of the time necessary for their completion and where no action is taken, the reasons therefor. The above information shall be forwarded to the Commission to the following address: MINISTERSTWO TRANSPORTU, BUDOWNICTWA i GOSPODARKI MORSKIEJ ul. Chałubińskiego 4/6; 00-928 Warszawa, tel. + 48 22 630 11 31, fax + 48 22 630 11 17*