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MINISTRY OF TRANSPORT, CONSTRUCTION AND REGIONAL DEVELOPMENT OF THE SLOVAK REPUBLIC

Aviation and Maritime Investigation Authority
Námestie slobody 6, P.O.BOX 100, 810 05 Bratislava 15



Reg. No.: SKS2014001

FINAL REPORT

on investigation of serious incident

Incorrect procedure of ATC staff

Date: 01.04.2014

Place: M. R. Štefánik Airport Bratislava / LZIB

The investigation of occurrence has been conducted pursuant to Art. 18 of the Act No. 143/1998 on Civil Aviation (Civil Aviation Act) and on Amendment of Certain Acts and in accordance with the Regulation (EU) No. 996/2010 of the European Parliament and of the Council on investigation and prevention of civil aviation accidents and incidents, governing the investigation of civil aviation accidents and incidents.

The final report is issued in accordance with the Regulation L 13 that is the application of the provisions of ANNEX 13 Aircraft Accident and Incident Investigation to the Convention on International Civil Aviation.

The exclusive aim of investigation is to establish causes of accident, incident and to prevent their occurrence, but not to refer to any fault or liability of persons.

This final report, its individual parts or other documents related to the investigation of occurrence in question have an informative character and can only be used as recommendation for the implementation of measures to prevent occurrence of other accidents and incidents with similar causes.

ABBREVIATIONS

Abbreviation	Slovak meaning / English meaning
AC	Asistent riadiaceho letovej prevádzky / Air Traffic Controller Assistant
APN	Odbavovacia plocha / Apron
ATCO	Riadiaci letovej prevádzky / Air Traffic Controller
APP	Približovacie stanovište riadenia / Approach control office
ATIS	Automatická informačná služba koncovej riadenej oblasti / Automatic terminal information service
BTS	Skratka v kóde ICAO pre Letisko M.R. Štefánika Bratislava / Abbreviation in the ICAO code for M. R. Štefánik Airport Bratislava
DVM	Dispečer mobilných prostriedkov / Dispatcher Vehicle Movement
ES	Vedúci smeny / Executive Supervisor
ft	Stopy (jednotky dĺžky) / Feet (dimensional units)
FPL	Podaný letový plán / Filed flight plan
HPA	Hektopascal / hectopascal
LK BTS	company Letisko M.R. Štefánika – Airport Bratislava, a.s.
LPS SR, š.p.	Letové prevádzkové služby Slovenskej republiky, štátny podnik / Air traffic services of the Slovak Republic
LSZS	Skratka v kóde ICAO pre Airport Samedan, Švajčiarsko / Abbreviation in the ICAO code for Airport Samedan, Switzerland
LZIB	Skratka v kóde ICAO pre Airport M.R. Štefánika Bratislava / ICAO code for M. R. Štefánik Airport Bratislava
MDVRR SR	Ministerstvo dopravy, výstavby a regionálneho rozvoja Slovenskej republiky / Ministry of Transport, Construction and Regional Development of the Slovak Republic
MHz	Megahertz
PC	Neradarový riadiaci letovej prevádzky / Non-radar air traffic controller
QNH	Nastavenie tlakovej stupnice výškomeru pre získanie nadmorskej výšky lietadla, ktorá je na zemi / altimeter subscale setting for reading aircraft altitude on the ground
ATC	Riadenie letovej prevádzky / Air traffic control
RWY	Vzletová a pristávacia dráha / Runway
TFI	Letové informačné stredisko pre TMA / Terminal Flight Information
TMA	Koncová riadená oblasť / Terminal control area
TWR	Letisková riadiaca veža alebo letisková služba riadenia / Aerodrome control tower or aerodrome control
TWY	Rolovacia dráha / Taxiway
UTC	Svetový koordinovaný čas / Co-ordinated Universal Time
VFR	Pravidlá letu za viditeľnosti / Visual flight rules

A. INTRODUCTION

Operator / Owner:	Aerotaxi s.r.o.	
Type of operation:	general aviation / sport and recreational flying	
Type of aircraft:	SR 22	
Registration No:	OK-RTA	
Place:	LZIB	
Flight phase:	take-off	
Place of serious incident:	RWY04 LZIB	
Concerned ground units:	LPS SR, š.p., ŠTEFÁNIK VEŽA	121,7 MHz
	ŠTEFÁNIK TOWER	118,3 MHz
	LK BTS – SOKOL	
	LK BTS – OCHRANA 2	
Date and time of incident:	01.04.2014, 12:24 h	

Note: All time data in this report are stated in the UTC time.

B. INFORMATIVE SUMMARY

On 01.04.2014 a SR 22 aircraft type with Registration No. OK-RTA and FPL according to VFR departed from the airport LZIB for the airport LSZS.

An employee of LK BTS – call sign “SOKOL” implemented the biological control measures at the airport LZIB. He obtained from DVM TWR Štefánik the permission to continue the drive from RWY31 through RWY22, TWY C to APN C.

Nearly at the same time, the pilot of aircraft OK-RTA obtained from PC TWR Štefánik the permission for take-off from RWY04. The aircraft OK-RTA and the vehicle SOKOL continued the drive in opposite direction.

Short after the take-off the pilot of aircraft OK-RTA reported the presence of a vehicle on RWY to TWR Štefánik. The vehicle SOKOL moving on RWY22 created an obstacle to the take-off of the aircraft OK-RTA.

The arrival of an Airbus 330-300 type aircraft of the Czech Airlines to the airport LZIB was planned for that day. Due to the great interest, a larger number of people was moving around the operating room of TWR Štefánik; these people kept themselves mostly on the “gallery”. The entry / presence of people in TWR Štefánik was agreed with ES APP/TWR Štefánik according to valid regulation.

Neither the crew of the aircraft, nor the vehicle drivers were injured.

The commission composed of the following members was appointed for investigation of the serious incident:

Lic. Jaroslava MIČEKOVÁ	- chairman of the investigation commission
Ing. Mária KOVÁČOVÁ	- member of the investigation commission
Ing. Ivo HRUŠOVSKÝ	- member of the investigation commission.

The report is issued by:

Aviation and Maritime Investigation Authority
of the Ministry of Transport, Construction and Regional Development
of the Slovak Republic

MAIN PART OF REPORT

1. FACTUAL INFORMATION
2. ANALYSES
3. CONCLUSIONS
4. SAFETY RECOMMENDATIONS

1. FACTUAL INFORMATION

1.1 History of the flight

On 01.04.2014 an employee of LK BTS – SOKOL implemented the biological control measures at the airport LZIB and an employee of LK BTS – OCHRANA 2 performed flight-related activities in the manoeuvring area of the airport.

At **12:19:41**, having lightened the engines, the pilot of aircraft OK-RTA on APN C called on the operating frequency of TWR Štefánik (118.3 MHz). He announced the type of aircraft and requested for clearance according to FPL under VFR to the airport LSZS. PC TWR Štefánik transmitted information ATIS FOXTROT, QNH 1013 HPa, and issued clearance to LSZS. After the take-off from RWY04 with a left turn to the leaving point DEVÍN, 2500 ft and less and to set the responder to A6751. The pilot of OK-RTA acknowledged the reception of information.

At **12:20:48** the pilot of OK-RTA requested for taxi clearance. PC TWR Štefánik ordered him to wait.

At **12:21:02** PC TWR Štefánik transmitted to TFI Wien the report ACTIVE for the flight of OK-RTA, A6751 via DEVÍN, 2500 ft or less.

At **12:21:21** PC TWR Štefánik ordered the pilot of OK-RTA to taxi along TWY D to the holding position RWY04. The pilot acknowledged.

At **12:23:43** PC TWR Štefánik ordered the pilot of OK-RTA to enter RWY04, but used an abbreviated call sign ORT (instead of the correct abbreviated call sign OTA). The pilot therefore asked whether it meant OTA. PC TWR Štefánik acknowledged that it had meant OTA. The pilot acknowledged.

At **12:24:32** the vehicle SOKOL called on the operating frequency of TWR Štefánik (121.7 MHz) (control of movement of vehicles and persons in the operational area).

At **12:24:37** PC TWR Štefánik asked the pilot OK-RTA whether he was ready. The pilot of OK-RTA acknowledged that he was ready (**12:24:40**).

At **12:24:40** DVM TWR authorized the vehicle SOKOL for access to RWY31 and ordered him to continue along RWY22, TWY C to APN C.

At **12:24:41** PC TWR Štefánik issued the pilot of OK-RTA clearance for take-off from RWY04, gave him the wind readings and ordered him to stay on the frequency. The pilot acknowledged the take-off clearance (**12:24:53**).

At **12:24:50** the vehicle SOKOL confirmed to DVM TWR the entry to RWY31 and continuation along RWY22 and TWY C to APN C (OK-RTA was taking off at that time). The driver of vehicle SOKOL did not see the aircraft OK-RTA on RWY22/04 because the hot air was rippling over RWY and the sun blinded him.

From the audio records it is apparent that when DVM TWR Štefánik was issuing clearance to the vehicle SOKOL, PC TWR Štefánik started to transmit the take-off clearance to OK-RTA. Both transmissions occurred simultaneously.

At **12:25:06** the driver of vehicle OCHRANA 2 reported the crossing of RWY22/04 and stopped in front of TWY D.

At **12:25:15** DVM TWR issued the stop order for the vehicle OCHRANA 2 (position in front of TWY D).

At **12:25:18** the driver of vehicle OCHRANA 2 requested DVM TWR to repeat the message.

At **12:25:21** AC APP Štefánik asked PC TWR Štefánik whether they had coordinated the VFR flight via DEVÍN, or wanted him to coordinate the flight. During this conversation, the pilot of OK-RTA, in the ground roll phase, reported to PC TWR Štefánik the presence of a vehicle (SOKOL) on RWY at **12:25:22**. As he was approaching the lift-off speed, he did not abort the take-off for the fear of a collision with the vehicle that still moved along the middle of RWY22 toward him. The position of vehicle SOKOL on RWY22 was approximately 30 – 40 m behind TWY A in the direction of TWY C. The height of aircraft OK-RTA at the time of crossing with the vehicle SOKOL was approximately 5 – 7 m above RWY, the estimated horizontal distance between the vehicle SOKOL and the aircraft OK-RTA at the time of lift-off was approximately 150 – 200 m.

At **12:25:34** the vehicle OCHRANA 2 requested TWR Štefánik to repeat the message.

At **12:26:41** PC TWR Štefánik requested the pilot of OK-RTA to report the position DEVÍN. The pilot confirmed that he would report the position DEVÍN.

At **12:28:02** PC TWR Štefánik changed the pilot OK-RTA over to Wien INFO, frequency 118,525 MHz. The pilot of OK-RTA confirmed the frequency.

The driver of vehicle SOKOL continued the drive along RWY22 to TWY C. In front of TWY D he stopped because of the taxiing aircraft. When the aircraft taxied by him, the driver requested TWR Štefánik for the permission to cross TWY D on APN C. TWR Štefánik acknowledged. When reaching APN C, the driver signed out of the operational area.

Daytime: day

The serious incident was reported by LPS SR, š.p. to the Aviation and Maritime Investigation Authority of the Ministry of Transport, Construction and Regional Development of the Slovak Republic.

1.2 Injuries to persons

Nobody was injured in the incident.

1.3 Damage to aircraft and vehicles

Without damage.

1.4 Other damage

No circumstances with potential claims for compensation of other damage toward a third party were notified to the Aviation and Maritime Investigation Authority.

1.5 Personnel information

Pilot:

National of the Slovak Republic, male, aged of 38 years

Holder of the CPL(A) commercial pilot licence issued by the issued by the Civil Aviation Authority of the Czech Republic on 09.08.2007.

Medical certificate of 1st class with marked validity until 16.07.2014.

Flying experience:

Total flight hours: 2126 h 24 min

Employee of DVM TWR

AA/AMM/DVM licence (ATIS assistant/Message Processing Assistant/Dispatcher Vehicle Movement) – issued by LPS SR, š.p., on 29. 03. 2004

Limited radiotelephonist licence for aeronautical mobile service II – issued by the Telecommunication Office of the Slovak Republic on 31. 05. 2007.

Driver of vehicle “SOKOL“

Holder of licence - limited radiotelephonist licence for aeronautical mobile service II, issued by the Telecommunication Office of the Slovak Republic

Holder of the valid driver’s licence for service areas, issued by the company Letisko M.R. Štefánika - Airport Bratislava, a.s. (BTS), valid until 05.08.2015

Attendee of training in the internal organizational regulation ON-03/2005 Traffic regulations of the Airport M.R. Štefánika Bratislava, on 05.08.2014.

Driver of vehicle “OCHRANA 2“

Limited radiotelephonist licence for aeronautical mobile service II, issued by the Telecommunication Office of the Slovak Republic

Holder of the valid driver’s licence service areas, issued by the company Letisko M.R. Štefánika - Airport Bratislava, a.s. (BTS), valid until 07.02.2015

Attendee of training in the internal organizational regulation ON-03/2005 Traffic regulations of the Airport M.R. Štefánika Bratislava, on 07.02.2013.

1.6 Information about aircraft

Registration No:	OK-RTA
Serial No:	2535
Year of manufacture:	2007
Manufacturer:	Cirrus Design Corp

1.7 Meteorological situation

The meteorological situation had no influence on the occurrence of serious incident.

1.8 Aids to navigation

N/A.

1.9 Communication

The aircraft was equipped by radiocommunication equipment enabling two-way radio communication with all air stations at every moment of flight.

The vehicles SOKOL and OCHRANA 2 were equipped by radiocommunication equipment enabling continuous two-way radio communication with ŠTEFÁNIK VEŽA.

1.10 Information about airport

The airport LZIB was suitable for flight operations at the time of serious incident.

1.11 Flight recorders

The sound recordings of radiocommunication between ŠTEFÁNIK VEŽA and SOKOL and OCHRANA 2, between ŠTEFÁNIK TWR and aircraft OK-RTA were evaluated.

The communication recordings on frequencies 118,3 MHz and 121,7 MHz were heard. The participants of the serious incident provided written statements.

1.12 Wreckage and impact information



1.13 Medical and pathological information

N/A.

1.14 Fire

No fire broke out.

1.15 Aspects of survival

N/A.

1.16 Tests and research

N/A.

1.17 Organizational and management information

The state enterprise Air Traffic Services of the Slovak Republic was founded by the Ministry of Transport, Posts and Telecommunications of the Slovak Republic with effect from 1 January 2000. LPS SR, š. p. is a business operator.

The mission of the enterprise is comprehensive provision of air navigation services, including:

- Air traffic services
- Air telecommunication service
- Air information service
- Search and rescue service.

In addition, the enterprise performs activities related to the implementation of basic purpose and business of the enterprise in the interest of ensuring a safe, effective and organized air traffic flow in the designated airspace and at airports with civil air traffic operations v in the Slovak Republic that request for provision of these services.

The operator of airport LZIB is company Airport M.R. Štefánika – Airport Bratislava, a.s. (BTS), holding the operating licence valid until 31.10.2014.

1.18 **Additional information**

N/A.

1.19 **Useful or effective investigation techniques**

Standard investigation techniques were used.

2. ANALYSIS

- 2.1 PC TWR Štefánik was issuing clearance for the take-off from RWY22 to the pilot of OK-RTA and DVM TWR Štefánik was issuing clearance for access to RWY22 to vehicle SOKOL. PC TWR Štefánik and DVM TWR Štefánik were issuing these clearances nearly simultaneously without being aware of it.

The vehicle SOKOL with clearance from DVM TWR Štefánik entered the occupied RWY22 and thus created an obstacle on RWY22 during the take-off of aircraft OK-RTA.

In the time interval before and during the incident DVM TWR Štefánik communicated on the operating frequency of TWR Štefánik (121.7 Mhz) with three vehicles: ELEKTRO 1, OCHRANA 2 and SOKOL. He observed movement of other aircraft in the operational area and followed other air traffic information.

DVM TWR Štefánik was distracted by the noise and presence of people who came to see the new Airbus 330-300. The entry / presence of these people to/in TWT Štefánik was agreed with ES APP/TWR Štefánik according to a valid regulation.

DVM TWR Štefánik did not register the movement of aircraft OK-RTA and could not see it because his view was obstructed by people present directly on the “gallery“ of TWR, he controlled movement of people (electronic lock) in the operating room of TWR. He only registered the take-off of aircraft OK-RTA when PC TWR Štefánik draw his attention to it and saw it only when he stood up from the chair (and got the view of RWY).

3. CONCLUSIONS / CAUSE OF SERIOUS INCIDENT

3.1 **Findings**

Nobody was injured in the incident.

Pilot of aircraft

According to the submitted documentation the pilot had valid qualifications for flying aircraft of the respective category.

Driver of vehicle SOKOL

- The driver held valid licence for performance of the respective activity
- The vehicle was not damaged.

Driver of vehicle OCHRANA 2

- The driver held valid licence for performance of the respective activity
- The vehicle was not damaged.

Employee of DVM TWR

The employee held valid licence for performance of the respective activity.

3.2 Cause of serious incident

DVM TWR Štefánik authorized the access of vehicle SOKOL to an active RWY22 without coordination with PC TWR Štefánik.

Contributing factors

DVM TWR Štefánik and PC TWR Štefánik were distracted by the presence of people in TWR, which was not necessary for provision of air traffic services.

4. SAFETY RECOMMENDATIONS

On the basis of investigation of causes of the serious incident, which occurred on **01.04.2014** at the M. R. Štefánik Airport Bratislava, we recommend:

LPS SR, š.p.

- To inform the operating personnel of APP/TWR ŠTEFÁNIK about results of the final report
- To organise training with all DVM and ATCO, aimed to coordination activities in TWR Štefánik and duties of individual functions,
- To determine the procedure and rules for authorization of visits and excursions to the air traffic control units
- To take a system measure for prevention of reoccurrence of similar incidents.

Bratislava, 01.07.2014