

SECTION I: SE OVERVIEW

Study Topic Overview Summary Following a wrong runway departure accident on August 27, 2006, in Lexington, Kentucky, ASIAS initiated a study to gather wrong runway event reports from several databases and found 117 reports of attempted or actual wrong runway takeoffs involving airplanes operating under 14 CFR part 121 between 1981 and 2006. A panel from CAST member organizations reviewed the reports to identify common factors and proposed mitigations. After the CAST panel eliminated duplicate reports and reports without sufficient information to determine contributing factors, 80 reports remained. The panel review identified several contributing factors, including crew resource management (CRM) deficiencies, airport geometry/complexity issues, human factors issues, and communications deficiencies. CAST adopted seven SEs as a result of the study, five of which were directed at airports and air traffic control (ATC).

SE Objective The purpose of this SE is for ATC to conduct a review of the procedure for clearances that specify all runways to be crossed before reaching the departure runway and restrict early takeoff clearances when flightcrews must cross multiple runways before reaching the departure runway. In addition, the FAA Taxi Into Position and Hold (TIPH) policy should be reviewed for appropriate limits or prohibition depending on airport characteristics. Any policy change will have to take into consideration any impact on airport capacity.

Aviation safety will be improved by evaluating policy and procedures for the issuance of early takeoff clearances that require the crossing of multiple runways before reaching the departure runway. Some mitigation strategies will need to be airport specific solutions. The wrong runway departure study identified mitigation strategies deployed by local ATC tower facilities, like Cleveland, to effectively reduce wrong runway departures. These strategies also could be effective at other airports but will require each tower facility to evaluate the feasibility and effectiveness of these solutions in their specific environment. All changes will have to take into consideration the impact on airport capacity.

Primary Risks Mitigated Runway Excursion (RE), Runway Incursion (RI), Loss of Control-Inflight (LOC-I), Navigation Errors (NAV)

Action	Organization(s)	Strategy	Description	Due Date
Action 1	FAA ATO	Procedures	Require all tower facilities to evaluate potential changes to the policy/procedures specific to the local airport environment for the issuance of early takeoff clearances that require the crossing of multiple runways before reaching the departure runway.	N/A
<i>Comments: CAST closed this action.</i>				
Action 2	FAA ATO	Procedures	Review TIPH policy for appropriate limits or prohibition depending on airport characteristics.	N/A
<i>Comments: CAST closed this action.</i>				

See section II of this SE for detailed action descriptions.

References: The detailed analysis in the Wrong Runway Departures Final Report (August 2007) is available through CAST.



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STUDY TOPIC	WRD
	WRONG RUNWAY DEPARTURES
CICTT RISK AREAS	RE, RI, LOC-1, NAV

SECTION II: DETAILED ACTION INFORMATION

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SE 182 consists of two actions, which this section lays out in detail.

- **Action 1 (FAA ATO)**.....PAGE 3
Evaluate potential changes to procedures for the issuance of early takeoff clearances
- **Action 2 (FAA ATO)**.....PAGE 4
Review TIPH policy for appropriate limits or prohibition depending on airport characteristics

SECTION III: SUPPLEMENTAL INFORMATION

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This section contains the following additional information that may be of interest to implementers:

- Source Study
- Related Initiatives
- Total Cost / Resource Overview

SECTION IV: REVISION LOG

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This section provides a history of revisions to this SE.

SECTION II: DETAILED ACTION INFORMATION

Action 1: Evaluate potential changes to procedures for the issuance of early takeoff clearances

Primary
Implementer

FAA Air Traffic Organization (FAA ATO)

Action Objective

FAA ATO should require all tower facilities to evaluate potential changes to the policy and procedures specific to the local airport environment for the issuance of early takeoff clearances that require the crossing of multiple runways before reaching the departure runway.

Action Timeline

Flow Time: 24 months

Due Date: N/A

Timeline/Flow for
Future Adopters

TBD

CAST Lead

FAA ATO

Organization(s) Detailed Steps

1a FAA ATO

Require each tower facility to evaluate the policy and procedures for issuance early takeoff clearances as applicable that require the crossing of multiple runways before reaching the departure runway.

Complete.

1b FAA ATO

Develop effective mitigation strategies to reduce wrong runway departures where air traffic control (ATC) clearances were a contributing factor. All changes will have to take into consideration impact on airport capacity.

Complete.

Notes

Performance Goals & Indicators for Safety Enhancement/Actions:

Goal. Establish the most effective ATC clearance standard for effectively mitigating the wrong runway departure occurrences.

Indicator. Reduce the number of wrong runway departures where ATC clearances are a contributing factor.

SECTION II: DETAILED ACTION INFORMATION

Action 2: Review TIPH policy for appropriate limits or prohibition depending on airport characteristics

Primary
Implementer

FAA Air Traffic Organization (FAA ATO)

Action Objective

FAA ATO should review Taxi Into Position and Hold (TIPH) policy for appropriate limits or prohibition depending on airport characteristics.

Action Timeline

Flow Time: 24 months

Due Date: N/A

Timeline/Flow for
Future Adopters

TBD

CAST Lead

FAA ATO

Organization(s) Detailed Steps

2a	FAA ATO	Require each tower facility to evaluate the policy and procedures for issuance of TIPH depending on specific runway operations. All changes will have to take into consideration impact on airport capacity.
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Complete.

Notes

Performance Goals & Indicators for Safety Enhancement/Actions:

Goal. Establish the most effective air traffic control (ATC) Taxi Into Position and Hold (TIPH) for effectively mitigating the wrong runway departure occurrences.

Indicator. Reduce the number of wrong runway departures where ATC clearances are a contributing factor.

SECTION III: SUPPLEMENTAL INFORMATION

Source Study Wrong Runway Departures Final Report (August 2007)

Related Initiatives N/A

Total Cost **\$7,200** *The FAA estimates of the cost to provide policy review at the 38 airports having the greatest number of wrong runway departure threat areas.*

Action 1

Action 2

	Organization	Resources Needed
Direct Resource Overview – Government	N/A	N/A

	Organization	Resources Needed
Direct Resource Overview – Industry	N/A	N/A

Indirect Resource Overview The organizations identified in this section are not expected to incur direct costs associated with implementing this SE, but they may incur indirect costs within their normal line of work.

	Organization	Description
	N/A	N/A



SECTION IV: REVISION LOG

Major revisions (whole numbers) represent CAST-approved changes to SE language. Minor revisions (decimals) represent minor changes to target dates or completion notes that do not affect implementer actions.

Revision	Date	Description
2.0	09/17/2018	New SE format. Content reorganized and terminology updated. No substantive changes.
1.0	12/06/2007	
Original	2007	CAST adopted SE 182.