ACF CG RD 09-01-214

United States Low Visibility Operations/Surface Movement Guidance System Operations [LVO/SMGCS]

Presented to: ACF 12-02

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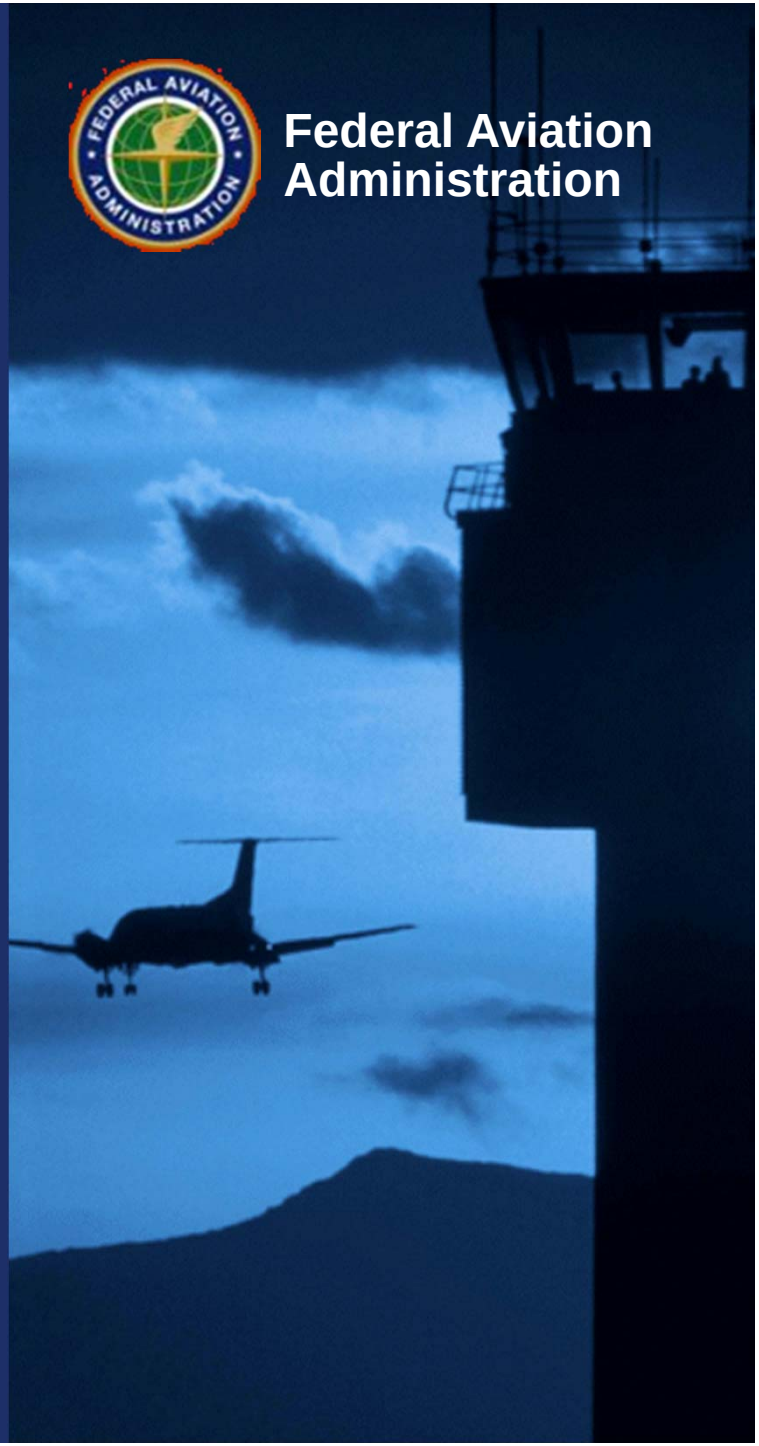

Today's Agenda

- **Review the Immediate NextGen Needs imposed by Order 8000.94**
  - Discussion and Questions
- **Overview of the Boston OSA and how to use the generic OSA document**
- **Results to date of the NASA Langley Test**
- **Follow up from AWO's, Questions and Discussion**

Considerations for Order 8000.94

- **Applicability of Order to FAA LOBs**
- **LVO/SMGCS program for airport operator remains voluntary**
- **Regulatory aspect of Pt 97 Cat III requirements, Opspec visibility aspects, and Part 139 Certification issues**
- **Web site LVO/SMGCS Airports Status list AFS-410: requires NextGen AWO updates**

More Considerations for Order 8000.94

- **Who signs the LVO/SMGCS Plan**
- **Elements to be completed for receiving an "FAA Approved LVO/SMGCS Operation"**
- **Who signs an "FAA Approved LVO/SMGCS Operation"**

Boston OSA

- Lowering Level 1 LVO/SMGCS lower limit visibility to 500 RVR
- Use the Boston OSA as an example and complete the applicable areas of the generic OSA
- Information you must insert/change etc goes where you see green highlighting
- Information you need to evaluate [add to or edit or remove] is in yellow

Hazards

Hazard Category	Hazard Number	Hazard Description
A) Strategic Planning Factors	A-1	United States LVO/SMGCS Operational Requirements are less than adequate. Situation results in increased accident risk.
	A-2	[Your airport's name] LVO/SMGCS Plan is less than adequate. Situation results in increased accident risks.
	A-3	Taxiing aircraft exceeds safe speed. Aircraft is unable to stop in time prior to collision with object or other aircraft
	A-4	Complex runway configurations/operations increase incident risks. Aircraft departing and arriving ramp area at same time. At movement area boundary taxi speeds are less than 10 knots. Complex runway configurations/operations increase incident risks. Aircraft departing and arriving ramp area at same time. At movement area boundary taxi speeds are less than 10 knots.
B) Operations Involving Take-off and Landing	B-1	Aircraft or vehicle inadvertently enter runway either active or inactive Situation results in increased accident risk
	B-2	Aircraft aborts on takeoff roll and does not report it while ATC clears next aircraft onto the runway
	B-3	Aircraft is landing and while on rollout (above 100 KIAS) ground vehicle or aircraft inadvertently enters the active runway
C) Taxiing Aircraft in the Airport Movement Area	C-1	RVR unknown for any segment of the taxi route RVR state does not meet requirements for operation Operation is attempted during zero/zero RVR condition Situation results in increased incident risks
	C-2	Aircrew inadvertently follows incorrect taxi route
	C-3	Crew misidentifies lighting or LVO/SMGCS markings or other airport signage and marking.
	C-4	Crew checks in at incorrect position prior to entering the movement area
D) Vehicle Movement Activity in the Airport Movement Area	D-1	Ground vehicle operator follows incorrect taxi route
	D-2	Ground vehicle operator misidentifies lighting or LVO/SMGCS position markings.
	D-3	Ground vehicle operator checks in at wrong position.
	D-4	Aircraft or vehicle encounters zero/zero visibility condition during LVO/SMGCS operation.

LVO/SMGCS restricts which runways are used

- **Under ideal conditions, KXXX, can access eight headings operating with six runways served by numerous taxiways. However, under low-visibility conditions, KXXX restricts departures to one runway, Runway 9. Similarly, arrivals also employ a single runway during low-visibility operations, Runway 4R. Figure 3 illustrates the counter-clockwise flow rotation of surface traffic aimed at ensuring procedural separation during adverse conditions accompanied by low visibility.**

Runway Incursions? Incidents

- Reports of Runway Incursion
- {Contact Bruce McGray or Philip Saenger if you need help with the data.)
- **Writer / author:**
- **Subject: Operational Safety Assessment (OSA) to lower [Your Airport's Name] Airport (KXXX)**
- **LVO/SMGCS Level I from RVR 1200-600 to RVR 1200-500.**
- **As part of the OSA, I researched the Runway Incursions at KXXX. My evaluation resulted in the following conclusions:**
- **1. In the period from 2001 to 2011, there was only one Class A incursion. This incident happened during good visibility.**
- **2. Since 2001, only one incident involved low visibility. (Attachment 1)**
- **3. A review of a study by Volpe revealed a very small number of runway incursions at 35 OEP airports involved low visibility. The number at KXXX is extremely small. (Attachment 2)**
- **Using this specific research, I have found that the LVO/SMGCS operation at KXXX would not be significantly impacted by lowering the Level I floor.**
- **Signature**

NASA Langley Test

- All simulator testing complete
- Data is being analyzed
- Follow up Volpe testing of chart symbols and best charting practices in progress
- White paper for ICAO Ops Panel in progress
- ICAO has established the LVO/SMGCS Study Group under the Ops Panel

- **Questions And Discussion**