RUNWAY INCURSION ASSSEMENET TEAM MEETING GUIDANCE - Surface Event Classification

A least one voting member from Air Traffic, Flight Standards, and Airport organizations must participate in all assessments. Voting members may participate either in person or via electronic means such as a teleconference, video conference, or an online discussion. Voting members will consider all relevant data, and use their best judgment to determine suitable severity classifications for each runway incursion event. Runway incursion events will be classified under the following guidelines:

a. Air Traffic, Flight Standards, and Airport organizations will each cast one assessment vote. Consensus among voting organizations is highly desirable but not required. However, consensus within each voting organization is required before casting their organizational vote.

b. Classification may be deferred if the team believes additional data is needed to accurately rank the event.

c. In order to promote consistency in the process, the following guidelines are established:

    1. A runway incursion involving only a single aircraft, pedestrian, or vehicle is assigned a default severity ranking of Category D. An aircraft which is 1 mile or more from the runway threshold is not considered to be involved in a runway incursion.

    2. If the aircraft, vehicle, or pedestrian causing a surface event crossed the runway holding position marking (hold line) but stopped more than 100 feet from the runway edge, the event is expected to be assigned a severity ranking of Category C.

    3. If both aircraft and/or vehicles are within the edges of the runway and the closest unintended proximity is no less than 2000 feet horizontal or in the case of an over flight, no less than 200 feet vertical, the event is expected to be assigned a severity ranking of Category C.

    4. If any part of an aircraft, and an aircraft, vehicle, or pedestrian are on or above the runway surface and the closest unintended proximity is within 100 feet horizontal or vertical, the event is expected to be assigned a severity ranking of Category A.

f. There may be insufficient data to provide a severity ranking for a surface event. These events will be assigned a severity classification of E.

Gather additional Data

1. When possible collect event specific data from pilots, controllers, vehicle drivers, and other related sources. Possible additional data sources:

1. Voice recordings for all ATCT positions involved in a surface event.

2. Ground Surveillance data for all incursions involving more than one aircraft (at locations where that capability was available during the event).

3. Other surveillance data recordings or replays, if requested and available.

4. Airport and air traffic control data sufficient to allow an airport diagram with appropriate distances, including closest proximity and distance when aircraft sent around.

5. VPD investigation information from airport authorities, including driver or pedestrian statements, if available.

From RIAT Process Work Instructions

Factors Affecting Severity Classification

Factors affecting the severity of a runway incursion are listed below.

a. **Proximity of the Aircraft and/or Vehicle:**
The closest proximity is taken from the most reliable source available. When an aircraft flies directly over another aircraft or vehicle the closest vertical proximity should be used. When both aircraft are on the ground, the proximity that is used to classify the severity of the runway incursion is the closest horizontal proximity. In incidents in which the aircraft are on intersecting runways, the distance from each aircraft to the intersection is used. It should be noted that in some instances, one party involved in an incursion may intentionally choose to close the distance between itself and the other vehicle, pedestrian, or aircraft. In such cases, the closest unintended proximity should be used in the ranking process.

b. **Geometry of the Encounter:**
Certain encounters are inherently more severe than others. For example, encounters with two aircraft on the same runway are more severe than incidents with one aircraft on the runway and one aircraft approaching the runway. Similarly, head-on encounters are more severe than aircraft moving in the same direction.

c. **Evasive or Corrective Action:**
When evasive or corrective action is taken to avoid a collision, the magnitude of the maneuver is an important consideration in classifying the severity. This includes, but is not limited to, hard braking action, swerving, rejected take- off, early rotation on take-off, and go-around. The more severe the maneuver, the higher its contribution to the severity rating. For example; encounters involving a rejected take- off with a distance rolled of 300 feet are more severe than those in which the distance rolled is less than 30 feet.

d. **Available Reaction Time:**
Encounters with little reaction time for collision avoidance are more severe than encounters with ample reaction time. For example; when assessing severity classification consider aircraft approach speeds and distance to runway involving go-around incidents. This means that an incident involving a heavy aircraft initiating a go- around at the runway threshold is more severe than one that involves a small aircraft initiating a go-around on a one-mile final.

e. **Environmental Conditions, Weather, Visibility and Surface Conditions:**
Conditions that degrade the quality of the visual information available to the pilot and controller, such as poor visibility, increase the variability of the pilot and controller response and, as such, may increase the severity of the incursion. Similarly, conditions that degrade

the stopping performance of the aircraft or vehicle, such as wet or icy runways, should also be considered.

f. **Factors that Affect System Performance:**
Factors that affect system performance, such as communication failures (e.g. “open mike”) and communication errors (e.g. the controller’s failure to correct an error in the pilot’s read back), also contribute to the severity of the incident.

Data Required for Severity Classifications

Data on all of the factors affecting the severity of a runway incursion must be available prior to classifying the incursion. The need to have a complete set of data available should be balanced with the reality that some data may not be available for some time. In general, the more severe the incursion, the more data will be needed to accurately classify the severity of the incursion. The following guidelines on required data are established:

a. Preliminary reports will typically be sufficient to rank incursions involving only one aircraft. The appropriate preliminary FAA form (see par. 10 (a-d), coupled with available airport information, may be used to complete classification of these events.

b. Other than (a) above, incursions for which replays or recordings of ground surveillance data is available will not be classified without this data, if the reported minimum separation is less than 4000 feet.

c. Other than (a) above, voice recordings should be made available to the assessment team before an incursion is classified when one or more team members determines this is required.

d. Other than (a) above, all classifications require an airport diagram and appropriate distances including closest proximity and distance when an aircraft sent around.