NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

March 09, 2015

Attachment 4 – Section 7.2 Clarification of Hazard Analysis Mitigations

SYSTEM SAFETY

DCA15MA019

The FAA states: "Recent meeting with Scaled Composites on their internal hazard analysis assessment resulted in several hazards that resulted in likelihood of occurrence that on the surface violated FAA interpretation of extremely remote (<1x10-6). However, the identified hazards can be reevaluated such that sufficient rationale, qualitative or quantitative, can be provided that supports the issuance of an experimental permit. For those cases where the mission occurs over sparsely or unpopulated areas, i.e. the possibility of the occurrence is limited to the system operations where the flight profile or ground operations are not in proximity to the general public, sufficient justification can be documented to support an extremely remote classification.

As a follow up to the technical interchange meeting held on March 19, 2013, Scaled Composites must provide a description of the additional qualitative mitigations that pertain to catastrophic hazards that have public safety implications to support an extremely remote classification of the hazard occurring."

1 Safety Analysis Mechanism

As described in Scaled's Application for an Experimental Permit, we use a Functional Hazard Analysis and Fault Tree Analysis as the primary means of Hazard Analysis for the program. The FHA analyzes *functions* and the FTA analyzes the *design of the system performing the function.* Additional qualitative mitigations are applicable to these hazards. These mitigations are not included in the FHA/FTA but still add safety to the systems and reduce the risk to the public and property. We believe these mitigations in addition to above analyses support a classification of "extremely remote".

It is worth restating that the hazard analysis is a tool Scaled uses to identify risks and get a ***rough*** estimate of probabilities so as to inform the design process. SS2 is a ***manned*** system and we have engineered it with crew safety in mind. As we have stated in our application we believe this approach assures the safety of the public and public property.

[redacted]