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**LITIGATION****FROM THE CHAIR**

By Mark S. Northcraft

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It is now time to start making your travel arrangements for the Second Annual Aviation Litigation Meeting to be held in New York City, New York, on June 28, 1996. Last year's meeting was a huge success. We hope to see you there this year. Also coming up is the Annual American Bar Association Meeting in Orlando, Florida, in August 1996. This year's meeting will be held at Walt Disney World and is to be a family event.

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GARRITY v. UNITED ALS



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**PILOT IN COMMAND LIABILITY FOR ACTIONS OF PARACHUTISTS**

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The Federal Aviation Administration ("FAA") has many regulations regarding parachute jumping and the duties/responsibilities of both the parachutists and the pilots who fly them.<sup>1</sup> These Federal Aviation Regulations ("FAR's") govern parachute jumps made in the United States, except those jumps necessitated by an inflight emergency.<sup>2</sup> A parachute jump is defined as "the descent of a person, to the surface from an aircraft in flight, when he intends to use, or uses, a parachute during all or part of that descent."<sup>3</sup> The FAR's in this case (Part 105) are divided into three subparts. Subpart A is the general definition section<sup>4</sup>, subpart B deals

1. See 14 CFR § 105, et. seq. (Authority: 49 U.S.C. App. 1348, 1354 and 1421; 49 U.S.C. 106(g)).

2. 14 CFR § 105.1(a).

3. 14 CFR § 105.1(b).

4. 14 CFR § 105.1.

with operating rules<sup>5</sup> and subpart C deals with regulation of parachute equipment.<sup>6</sup> This article will focus on the FAA's enforcement of violations of the operating rules contained in subpart B, and specifically, the liability of the pilot in command for the actions of parachutists.

The operating rules in subpart B cover numerous aspects of the jump, including, but not limited to, the type of radio equipment required by the pilot in command<sup>7</sup>, notice requirements<sup>8</sup>, flight visibility requirements<sup>9</sup>, time of day restrictions<sup>10</sup>, inspections<sup>11</sup>, and use of drugs and alcohol by jumpers<sup>12</sup>. These FAR's also designate where parachutists may jump. There are restrictions against jumping over and/or onto congested areas<sup>13</sup>, airports without prior approval<sup>14</sup>, certain classes of airspace<sup>15</sup>, and restricted and prohibited areas.<sup>16</sup> Subpart B, however, does not apply to jumps necessary to meet an emergency on the surface, when the jump is made at the direction or with the approval of any agency of the United States, or of a state, Puerto Rico, the District of Columbia, or a possession of the United States, or of a political subdivision of any of these.<sup>17</sup> Specific military operations as defined in § 105.11(c) and (d) are also excluded from many of the regulations set forth in this part.

The general, all encompassing provisions of §105 state that "[n]o person may make a parachute jump, and no pilot in command of an aircraft may allow a parachute jump to be made from that aircraft, if that jump creates a hazard to air traffic or to persons or property on the surface."<sup>18</sup> However, Section 105 does not define what constitutes a hazard to air traffic or persons or property on the surface. Accordingly, one must look to relevant case law for guidance. As the focus of this article is liability of the pilot in command, the following discussion of case law is limited to liability of the pilot in command for creating a hazard to both air traffic and people on the surface under §105. One last point to keep in mind when reviewing these cases is that a 1991 survey conducted by the United States Parachute Association ("USPA") found that 92.7% of drop zones are located on or adjacent to an airport.<sup>19</sup>

- 5. 14 CFR § 105.11-37.
- 6. 14 CFR § 105.41-43.
- 7. 14 CFR § 105.14.
- 8. 14 CFR § 105.25.
- 9. 14 CFR § 105.29.
- 10. 14 CFR § 105.33.
- 11. 14 CFR § 105.37.
- 12. 14 CFR § 105.35.
- 13. 14 CFR § 105.15.
- 14. 14 CFR § 105.17.
- 15. 14 CFR § 105.19.
- 16. 14 CFR § 105.27.
- 17. 14 CFR § 105.11(b).

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**ADMINISTRATOR v. TERRY**<sup>20</sup>

Terry was the first Board decision involving Part 105, specifically §§105.13 and 105.15. As set forth above, §105.13 is the "catch-all" provision and §105.15 deals with jumps over or into congested areas or open air assembly of persons. In this case, the Administrator appealed an Administrative Law Judge's ("ALJ's") determination that the pilot (Terry) had not violated §105.13. Simultaneously, Terry appealed the judge's finding that he had violated § 105.15.<sup>21</sup> Since Terry failed to file an appeal brief regarding the §105.15 violation, the appeal was limited to an analysis of §105.13.<sup>22</sup>

The facts under which this 1980 case arose were not in dispute. Terry, a pilot whose business catered exclusively to skydivers, was approached by representatives of a high school in Erie, Colorado to provide a parachute drop onto school grounds as part of the high school's homecoming football game halftime show.<sup>23</sup> An inspection of the jump site was made along with provisions for crowd control.<sup>24</sup> Terry fulfilled the necessary operating requirements, including initiating a Notice to Airman ("NOTAM") regarding the time and location of the jump activity. He also maintained continuous contact with Denver Approach Control, as well as with someone on the ground at the stadium for up to the minute status of crowd control and wind conditions.<sup>25</sup>

On the day of the game, five experienced jumpers were dropped over an open field approximately 3/4 mile from the stadium, at an altitude of 3900 feet

above ground level.<sup>26</sup> After Terry received clearance from Denver Approach Control and the crowd control people to begin the jump, the visiting team's coach (against the directions of the persons responsible for crowd control), ordered his players to take the field.<sup>27</sup> As a result, one of the jumpers landed 30 to 35 feet from one of the players.<sup>28</sup>

The FAA inspector who investigated the incident testified that he would have denied a request for a certificate of authorization (to jump over or into an open air assembly of people) on the basis that there was not sufficient indicia that the jumpers would land at least 100 feet from all spectators.<sup>29</sup> The inspector admitted, however, that the exit area for the jump was "very good" and that Terry's preparatory measures were the same as would have been required if Terry had requested a certificate of authorization from the FAA.<sup>30</sup>

Ultimately, the Board agreed with the ALJ that the precautions taken by Terry were reasonable under all of the circumstances, and that he could not have anticipated the actions of the visiting team's coach and therefore, Terry had not created a hazard to air traffic or person or property on the ground in violation of §105.13.<sup>31</sup> The Board also found excessive the ALJ's reduction in sanctions for Terry's §105.15 violation from a 180 day suspension to 45 days. In that regard, it found that a 90-day suspension was appropriate under the circumstances.<sup>32</sup>

26. Terry at 2603.

27. Id.

28. Id.

29. Terry at 2604. Please note the 100 foot requirement is an internal FAA policy and is therefore not contained in any of the FAA's or case law.

30. Id.

31. Terry at 2604-05.

32. Terry at 2605.

18. 14 CFR § 105.13.

19. Note that 120 Group Members responded to the survey, reflecting approximately 65% of the domestic drop zones.

20. Administrator v. Terry, Docket SE-4233, 4 N.T.S.B. 1091, 1983 WL 43513 (May 19, 1980).

21. Id.

22. Id.

23. Terry at 2603.

24. Id.

25. Id.

**ADMINISTRATOR v. WEBB**<sup>33</sup>

The next decision in this area also arose from a complaint alleging violations of §§105.13 and 105.15. As in Terry, the ALJ in this 1981 case found that the pilot in command had not violated §§105.13 and 105.15 as alleged by the FAA. The FAA then appealed.<sup>34</sup>

Webb was the pilot in command of a flight from which parachute jumps were made over the campus of Louisiana Tech.<sup>35</sup> The jumpers landed in the vicinity of a swimming pool which was clearly in a congested area, given its proximity to dormitories and other structures.<sup>36</sup> There was testimony at the hearing, however, that Webb was unaware that the jumpers had intended to land in the pool.<sup>37</sup> In fact, the parachutists exited the aircraft at a point approximately 2,112 feet laterally from the pool and over an uncongested area called the "Dust Bowl."<sup>38</sup> The Dust Bowl consisted of an open field measuring approximately 200 feet by 400, bounded on the north by a large wooded area containing several homes, on the south by a field containing a running track, on the east by a road running through the campus, and on the west by a paved parking area.<sup>39</sup>

Webb testified that he did not consider the area to be congested given the fact that there were no vehicles in the parking lot and no persons in the field when the jumpers were dropped from an altitude of 8,500 feet over the northern edge of the Dust Bowl.<sup>40</sup> The parachutist that Webb called as an expert witness testified that in 1968 (11 years prior to the jump), the then manager of the FAA's local General Aviation District Office stated it was proper to jump into the Dust Bowl area without first obtaining FAA approval.<sup>41</sup>

33. Administrator v. Webb, Docket SE-4504, 3 N.T.S.B. 3390, 1981 WL 40222 (March 11, 1981).

34. Webb at 3390.

35. Id.

36. Webb at 3391.

37. Id.

38. Id.

On appeal, the Board found that the hazard in this instance arose not from the parachutists being dropped over the Dust Bowl area, but rather from the fact that the parachutists chose (without the pilot Webb's knowledge or consent) to land near the swimming pool.<sup>42</sup> Moreover, responsibility for creating the hazard in this instance lies with the parachutists themselves, in that they were able to control their descent and manipulate their point of landing.<sup>43</sup> Accordingly, the Board held that the pilot was not responsible for the independent actions of the parachutists.

**ADMINISTRATOR V. DEVILLE**<sup>44</sup>

In this 1981 decision, the pilot appealed from an ALJ decision finding that he violated FAR §§105.13, 105.15(a), 105.17(a), 105.23(a) and 91.9.<sup>45</sup> As previously set forth, §105.13 is the general "catch-all" provision and §105.15(a) deals with parachuting over congested areas. Section 105.17(a) involves jumps over uncontrolled airports, §105.23(a), jumps into "other airspace," and §91.9 deals with careless or reckless operation of an aircraft. The Board reversed the ALJ's decision, finding that the pilot, DeVille, was not liable for the violations charged.

The facts upon which this matter arose are that DeVille carried four parachutists who sought to make a six mile cross country jump from a point approximately seven miles southwest of the landing site.<sup>46</sup> One of the parachutists exited the aircraft at 7,500 feet and landed near the intended landing site.<sup>47</sup> The other three parachutists, however, exited the aircraft at 9,500 feet and encountered winds that were stronger

39. Id.

40. Id.

41. Id.

42. Webb at 3392.

43. Id.

44. Administrator v. DeVille, SE-4772, 3 N.T.S.B. 3752, 1981 WL 40266 (June 25, 1981).

45. DeVile at 3752-53.

46. DeVile at 3752.

47. Id.

than provided to them by the FAA Flight Service Station.<sup>48</sup> As a result, this last group of three parachutists were carried approximately three miles beyond the intended landing zone and ended up drifting past an airport.<sup>49</sup> The jumpers ultimately landed along the eastern perimeter of a town -- one in a tree in front of a house in a residential area, one in a school playground, and one near an interstate highway.<sup>50</sup>

In its decision, the Board restated its position that Part 105 imposes various responsibilities on both parachutists and pilots. It further found that the Part 105 standards, if read literally, would amount to absolute liability for the pilot, by holding the pilot accountable for regulatory breaches committed exclusively by the parachutists involved.<sup>51</sup> Based on its own precedent, however, the Board was reluctant to apply a strict liability standard to pilots for actions taken by parachutists once the parachutists leave the aircraft.<sup>52</sup>

Analyzing this matter, the Board indicated that it looked to the normal standard of care a pilot is expected to maintain, rather than a strict liability standard.<sup>53</sup> Accordingly, a pilot cannot be said to have violated the provisions of Part 105 unless "his conduct in allowing these jumps to be made reflects a departure from his responsibility to act as a reasonable and prudent pilot."<sup>54</sup> The Board's decision that no such departure occurred here was based on the fact that there was no showing by the FAA that the pilot knew or should have known that the parachutists would drift two to three miles off target and end up in a congested area.<sup>55</sup> Rather, it found from the evidence that DeVille had done the necessary pre-jump planning and neither he nor the parachutists had a

48. *Id.*

49. *DeVile* at 3753.

50. *Id.*

51. *DeVile* at 3753 citing *Webb* at page 4.

52. *DeVile* at 3753.

53. *DeVile* at 3753 citing *Administrator v. Parker*, NTSB Order No. EA-1512 at 2 (1980).

54. *DeVile* at 3753.

55. *Id.*

reasonable basis to anticipate the extreme change in wind velocities.<sup>56</sup> Moreover, it held that the parachutists' ability to maneuver their chutes to alternate landing sites once they knew they would overshoot the original landing site underscores the fact that there was no flaw in DeVille's judgment or in the exercise of his duty of care as a pilot for the jump.<sup>57</sup> Consequently, the Board held that the charges could not be sustained based on the fact that DeVille's conduct was consistent with that demanded of a reasonable and prudent pilot.<sup>58</sup>

#### ADMINISTRATOR v. LINDSAY<sup>59</sup>

This 1990 decision results from charges that a pilot in command, Lindsay, violated four sections of the FAR's, including §§ 105.13<sup>60</sup> and 105.17<sup>61</sup>, when he permitted parachute jumps to be made from his aircraft in the vicinity of the Mid-Florida Airport in Eustis, Florida. The FAA alleged that the parachutists, without prior approval from airport management, drifted over the runway at an altitude of less than 100 feet, creating a hazard under Part 105.<sup>62</sup> The FAA also alleged that Lindsay carried two passengers over the age of two who were not occupying a seat or a berth, thereby violating FAR §§ 91.14(a)(3) and 91.9<sup>63</sup>. In this case, the Board affirmed the ALJ's decision as to both the violation and the 60 day suspension of Lindsay's airman certificate.<sup>64</sup>

In his appellate papers, Lindsay contended that the ALJ's finding of a violation under Part 105 was contrary to Board precedent since he briefed the parachutists to comply with the FAR's and the

56. *DeVile* at 3753-54.

57. *DeVile* at 3754.

58. *Id.*

59. *Administrator v. Lindsay*, Docket SE-9233 (N.T.S.B.), 1990 WL 339054 (July 18, 1990).

60. The "catch-all" provision precluding conduct which creates a general hazard.

61. § 105.17 is entitled "Jumps over or onto airports".

62. *Lindsay* at 1-2.

63. FAR § 91.14 deals with use of safety belts and shoulder harnesses while § 91.9 deals with careless or reckless operation of an aircraft.

64. The suspension resulted not only from violations of § 105.13 and 105.17, but also included violations of §§ 91.9 and 91.14.

parachutists choice to deviate from his instructions was beyond his control.<sup>65</sup> Lindsay cited Terry, Webb, and DeVille in support of his argument. The Board disregarded his arguments in its decision, however, holding that there is no precedent to exculpate a pilot who knowingly allows parachute jumps to be made from his plane when the pilot knew, or should have known, that the parachutists would pose a hazard.<sup>66</sup> The Board distinguished Lindsay's situation from Terry, Webb, and DeVille by stating that Lindsay should have been aware, from the original plan, that having the parachutist jump from almost directly over the airport in order to land at a drop zone adjacent to the airport would have caused a hazard.<sup>67</sup> The Board failed to address in its analysis, however, whether Lindsay's actions would have been proper had he obtained prior approval from airport management per §105.17. Accordingly, the usefulness of this case is limited to instances where the pilot in command neglects to obtain approval from airport management, rather than in all cases where jumps take place over an airport.

**ADMINISTRATOR v. O'HARE<sup>68</sup>**

Although this decision is from an ALJ, was not appealed and therefore cannot be cited as precedent, it is nonetheless instructive since it analyzes the phrase "hazards to persons on the surface" contained in §105.13. The facts of the case, which were not in dispute, allege that O'Hare flew a Cessna 172 over Siloam Springs, Arkansas, with a parachutist on board.<sup>69</sup> Prior to the jump, O'Hare and the parachutist discussed the parachutist's intention to land on a nearby softball field, which he ultimately did.<sup>70</sup>

65. Lindsay at 2.  
 66. Lindsay at 4.  
 67. Lindsay at 4-5.  
 68. Administrator v. O'Hare, Docket SE-11417 (N.T.S.B.), 1991 WL 348425 (April 11, 1991).  
 69. O'Hare at 1.  
 70. Id.

The Administrator charged O'Hare with violating §§105.13, 105.15(a),<sup>71</sup> and 105.23(a)<sup>72</sup> of the FAR's. The judge found sufficient proof at trial to indicate that O'Hare made the necessary pre-jump report to air traffic control under §105.23(a).<sup>73</sup> With regard to the §105.15(a) allegation, there was also testimony that the parachutist landed in a more congested area of the softball field than he originally discussed with O'Hare.<sup>74</sup> That testimony, in connection with the parachutist's ability to manipulate his landing spot, was sufficient to establish to the ALJ's satisfaction that the landing area originally discussed between O'Hare and the parachutist was not an open air assemblage of people under §105.15(a).<sup>75</sup> Accordingly, the ALJ found that O'Hare did not violate §§ 105.23(a) or 105.15(a).

The most significant aspect of this case for our purposes, however, is Judge Mullins' analysis of the remaining §105.13 charge and the "hazards to persons or property on the surface" language contained in that section. Specifically, and notwithstanding his analysis of the other charges, the judge determined that a hazard nonetheless existed as a result of the danger posed to the softball players on the playing field. This hazard, however, did not arise out of concern that the players might be hit by the parachutist. The hazard resulted instead from the fact that the players, distracted by the parachutist, would look up to watch him, thereby putting the players at risk of either being hit by a softball or of some other injury resulting from the ongoing softball game.<sup>76</sup> O'Hare was ultimately found in violation of §105.13 and his airman certificate was suspended for 15 days.

71. FAR § 105.15(a) concerns when a pilot in command allows a jump to be made over or onto a congested area.  
 72. FAR § 105.23(a) concerns when a pilot in command fails to contact the nearest FAA air traffic control facility or FAA flight service station at least one hour before the jump is to take place.  
 73. O'Hare at 3.  
 74. Id.  
 75. O'Hare at 3-4.  
 76. O'Hare at 4.

## CONCLUSION

The case law discussed in this article is instructive but not dispositive of the confusion arising from the language of Part 105. The first three cases, Terry, Webb, and DeVille, make it clear that a pilot is not responsible for the independent actions of a parachutist which are beyond the pilot's control. Deciding what actions are beyond the pilot's control, however, is the difficult aspect of determining the pilot in command's potential liability.

Fortunately for pilots, the Board recognizes that although Part 105 read literally amounts to a strict liability standard, such is contrary to Board precedent. Rather, the Board applies the usual standard of care that a pilot is expected to maintain. As a result, a pilot faces liability under Part 105 when he or she directly violates a specific provision of that Part or when his or her conduct is contrary to their overriding responsibility to act as a reasonable and prudent pilot.

A section of Part 105 that requires particular clarity, however, is §105.17, which involves jumps over an airport. That section makes it clear that dropping a parachutist over an airport is not a per se violation of Part 105. Rather, a violation results only where the pilot in command fails to obtain approval from airport management. As set forth in this article, the case law makes an initial distinction concerning whether prior management approval has been obtained in order to determine liability. Later cases, however, analyze liability in terms of whether the pilot allowed the jump to be made over the airport, thereby implying a strict liability standard. Given the fact that most drop zones are on or adjacent to airports, a strict liability enforcement policy for jumps made over an airport is not only contrary to the Board's specific holding in DeVille, but is also impractical and illogical. Accordingly, even though cases like Lindsay fail to follow the §105.17 distinction regarding whether or not

prior permission had been obtained, any other analysis would be contrary to the FAR's themselves. ■

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## METALLURGICAL TECHNIQUES FOR AIRCRAFT COMPONENT FAILURE ANALYSIS

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## INTRODUCTION

The initial stage of most aircraft accident investigations involves a complete examination of all critical systems. The investigations sort out the possible component failure(s) responsible for the crash. Any conclusions are usually dependent upon an in-depth metallurgical/materials analysis of the failed component(s). This analysis will most likely determine whether or not the failure was due to design deficiencies, material defects, overuse, or improper maintenance. The type of failure is critical from a liability standpoint. This failure information is equally important in launching corrective actions preventing similar failures, thereby saving lives and property, and reducing the costs of insurance payoffs and product liability litigations.

Modern technology and state-of-art analytical instrumentation enable us to determine the actual causes of failures. Failure analysis is performed by materials engineers and metallurgists using Scanning Electron Microscopy (SEM), Energy Dispersive X-ray Spectroscopy (EDS), Auger Electron Spectroscopy