

## **Federal and State Space Tort Liability**

**By Adam J. Zayed**

Human space transportation has historically been the province of national governments. In the United States, tort liability for death to crew has arisen only within the context of the Federal Tort Claims Act.<sup>1</sup> Since the first private space tourist entered orbit in 2001, numerous private space tourism companies have been formed with the relatively immediate goal of offering suborbital space flights.<sup>2</sup> Suborbital space tourism is seen as a first step towards the commercialization of space, with orbital flight offerings to follow.<sup>3</sup> Suborbital flights have enough velocity to pass through the boundary between atmosphere and space but do not have enough velocity to enter earth's orbit.<sup>4</sup> Orbital flights achieve the velocity necessary to enter orbit, but this extra velocity comes at great additional difficulty and cost.<sup>5</sup>

The technology to safely take "space flight participants," as space tourists are statutorily defined, on suborbital trips is still under development.<sup>6</sup> In anticipation of the commercial human space transportation market and associated liability exposure, federal legislation was passed in 2004 with the delicate purpose of "neither stifl[ing] technology development nor expos[ing] crew or space flight participants to avoidable risks as the public comes to expect greater safety...from the industry."<sup>7</sup> To this end, federal legislation requires space tourism operators to provide information about the risks of spaceflight and to obtain the "informed consent" of space flight participants.<sup>8</sup> Taking the federal informed consent requirements farther, several states have passed laws providing tort immunity to space tourism operators provided that participants sign liability waivers.

Limiting liability for space torts is an emerging issue at the nexus between the values of advancement of space flight and the responsibility for negligence. This article is an overview of the current space tort liability regime in the United States.<sup>9</sup>

## **Federal Regulation: The Commercial Space Launch Amendments Act of 2004**

The federal requirements governing the licensing and regulation of commercial human space flight are codified in the Commercial Space Launch Amendments Act of 2004 (“CSLAA”).<sup>10</sup> The CSLAA gives the FAA authority to regulate the safety of space launches by requiring FAA licenses and permits for space flights.<sup>11</sup>

While the CSLAA requires space flight operators to obtain insurance or to show financial responsibility for injuries to third parties and the U.S. government,<sup>12</sup> operators are not required to insure injuries to space flight participants.<sup>13</sup> Rather than setting forth any waiver of liability or immunity, the CSLAA requires space flight operators to inform space flight participants of the risks of “launch and reentry, including the safety record of the launch or reentry type vehicle.”<sup>14</sup> Space flight participants must also provide their written “informed consent” to engage space flight activities.<sup>15</sup> Although space flight participants are not required to sign liability waivers as to operators, participants are required to execute reciprocal waivers with the U.S. government.<sup>16</sup>

### **Failure to Provide Informed Consent a Tort?**

There is some debate as to whether congress *intended* to create a tort by means of the use of the phrase “informed consent,” a phrase used more frequently in a medical context.<sup>17</sup> One argument is that rather than creating a new tort, the informed consent requirement “‘essentially legislates personal responsibility on the part of the space tourist’ and makes participants ‘informed consumers.’”<sup>18</sup>

Another perspective is that the use of the phrase “informed consent” created a separate independent tort against space flight operators.<sup>19</sup> It is reasonable to assume that failure to provide informed consent will be used as a basis for tort litigation, and to this end the FAA commissioned a study to examine the issue of what a commercial space flight operator will need

to do to provide informed consent.<sup>20</sup> Potential hazards include high decibel noise, high pressure, low pressure, high g-forces, microgravity, high temperature, low temperature, high radiation levels, sunlight, physical impact trauma, exposure to toxic chemicals, electrical shock, loss of breathable atmosphere, and loss/damage of personal effects on board or at launch site.<sup>21</sup>

### **Traditional Common Limitations on Liability**

When passing the CSLAA congress viewed commercial human space flight as comparable to adventure travel, as opposed to a highly regulated industry such as commercial aviation.<sup>22</sup> The phrase “informed consent” is not usually used in the adventure sport context or the equestrian or skiing context for that matter. Adventure sport operators typically rely on defenses such as assumption of the risk and exculpatory agreements including waivers and releases.<sup>23</sup> It is widely assumed that traditional defenses to liability such as assumption of risk and exculpatory agreements such as waivers will be applied in the event of commercial human space flight accidents.

### **State Space Tort Immunity**

Six states have passed space flight immunity acts with the specific intention of enticing space flight operators to develop spaceports with the hope of job creation and a positive effect on their tax base.<sup>24</sup> Although the question of whether federal preemption of state law exists as it relates to tort liability of space flight operators is unresolved,<sup>25</sup> tort immunity statutes have been passed in California, Colorado, Florida, New Mexico, Texas and Virginia. The six state immunity statutes are similar in many ways, yet there are key differences.<sup>26</sup>

Virginia was the first state to enact a tort immunity statute in 2007,<sup>27</sup> and California passed the most recent immunity statute in 2012.<sup>28</sup> All “space friendly” states require the space flight operator to provide a warning statement to space flight participants in addition to

informing them of the risks of space flight pursuant to federal regulation.<sup>29</sup> Spaceflight participants must also give their informed consent.<sup>30</sup> As an example, Virginia's warning statement reads as follows:

WARNING AND ACKNOWLEDGEMENT: I understand that, under Virginia law, there is no civil liability for bodily injury, including death, emotional injury, or property damage sustained by a participant in spaceflight activities provided by a spaceflight entity if such injury or damage results from the risks of the spaceflight activity. I have given by informed consent to participate in spaceflight activities after receiving a description of the risks of spaceflight activities as required by federal law pursuant to 49 U.S.C. § 70105 and 14 C.F.R. § 460.45. The consent that I have given acknowledges that the risks of spaceflight activities include, but are not limited to, risks of bodily injury, including death, emotional injury, and property damage. I understand and acknowledge that I am participating in spaceflight activities at my own risk. I have been given the opportunity to consult with an attorney before signing this agreement.<sup>31</sup>

All six states also deny immunity for gross negligence or willful or wanton disregard for the safety of spaceflight participants.<sup>32</sup>

The six immunity statutes differ in several ways but primarily in their definition of the entity entitled to claim immunity and whether immunity is extended to spacecraft or parts manufacturers.<sup>33</sup> New Mexico is unique in that it denies immunity to operators that do not have a minimum of \$1,000,000 in insurance covering space flight activities.<sup>34</sup>

## **Conclusion**

With commercial human space transportation in its infancy, federal and state governments are tackling the tort liability exposure of operators in different ways. Virtually all commenters argue that federal and state governments are not doing enough to prevent the budding commercial space industry from being grounded. One commenter argues for a federal "time-limited immunity shield,"<sup>35</sup> while another refers to the various state tort immunity statutes

as “imperfect” and inadequate.<sup>36</sup> Some argue that the space tort liability regime should be modeled on aviation or maritime law.<sup>37</sup> Space flight operators are unequivocal in their lobbying efforts to expand tort immunities and choose to do business in states that pass comprehensive tort immunity laws that not only immunize operators but also companies that make parts and supply components.

A somewhat rare voice on the other side of this debate came from a member of the New Mexico Trial Lawyer Association who begged the question: “at what cost does [a state] sacrifice its public policy in exchange for hypothetical economic development?”<sup>38</sup>

## Endnotes

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<sup>1</sup> Justin Silver, Note, *Houston, We Have A (Liability) Problem*, 112 Mich. L. Rev. 833, 834 (2014)(citing 28 U.S.C. §§ 1346(b), 2671-80 (2006)).

<sup>2</sup> E.g. Virgin Galactic; XCOR; Armadillo Aerospace; Airbus.

<sup>3</sup> Silver, *Houston*, at 834

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> “Space Flight Participant” is a phrase used in the Commercial Space Launch Amendments Act of 2004 to define individuals in space who are not crew. 51 U.S.C.A § 50902(17).

<sup>7</sup> *Id.* at § 50901(15).

<sup>8</sup> *Id.* at § 50905(5)(A)-(B).

<sup>9</sup> This article does not address international space tort liability issues.

<sup>10</sup> Paul Alp, *Limitations On Liability As To Space Tourists*, 2011 A.B.A. Sec. Tort Trial Insurance 7, 8 available at <http://www.crowell.com/files/2011-Limitations-On-Liability-As-To-Space-Tourists.pdf>.

<sup>11</sup> 51 U.S.C. §§ 50904-6.

<sup>12</sup> *Id.* at § 50914(a)-(c).

<sup>13</sup> *Id.* at § 50902(21)(E).

<sup>14</sup> *Id.* at § 50905(b)(5)(A).

<sup>15</sup> *Id.* at § 50905(b)(5)(C). See APT Research, Inc., *Study on Informed Consent for Spaceflight Participants*, Doc. No. APT-CFA-230-0001-02F, (Sep. 26, 2008), available at [https://www.faa.gov/about/office\\_org/headquarters\\_offices/ast/reports\\_studies/library/media/Informed\\_Consent\\_for\\_Spaceflight\\_Participants.doc](https://www.faa.gov/about/office_org/headquarters_offices/ast/reports_studies/library/media/Informed_Consent_for_Spaceflight_Participants.doc), at 16-19.

<sup>16</sup> 14 C.F.R. § 460.49.

<sup>17</sup> See Alp, *Limitations*, at 9.

<sup>18</sup> *Id.* (citing Rebekah Davis Reed, Ph.D., *Ad Astra Per Aspera: Shaping a Liability Resgime For The Future of Space Tourism*, 46 Hous. L. Rev. 585, 599-600 (Spring 2009)).

<sup>19</sup> Alp, *Limitations*, at 9 (citing APT Research, Inc., *Study*, at 7.). See 14 C.F.R. § 460.45 (requirements for providing informed consent to space flight participants).

<sup>20</sup> APT Research, Inc., *Study*, at 1.

<sup>21</sup> *Id.* at 16-24.

<sup>22</sup> *Id.* at 7.; see 70 Federal Register 249, 77269 (Dec. 29, 2005).

<sup>23</sup> *Id.* at 8.

<sup>24</sup> See *New Mexico Space Flight Liability and Immunity Act* H.R. 37, 49<sup>th</sup> Leg., 1<sup>st</sup> Spec. Sess. (Nm. 2009) (Proposed Draft), available at <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=>

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0CCMQFjAA&url=http%3A%2F%2Fnmlegis.gov%2FSessions%2F09%2520Regular%2Fbills%2Fsenate%2FSB0037.pdf&ei=TtWyVOTzA475yQTiioLgBw&usg=AFQjCNEjqRoMho-7FDzSwhsgpYi7\_zHNWA&bvm=bv.8339334.d.aWw.

<sup>25</sup> Alp, *Limitations*, at 10.

<sup>26</sup> Silver, *Houston*, at 849.

<sup>27</sup> Va. Code Ann. §§ 8.01-227.8 to .10 (2007 & Supp. 2013).

<sup>28</sup> Cal. Civ. Code §§ 2210-12 (West Supp. 2013).

<sup>29</sup> *Id.*; Va. Code Ann. §§ 8.01-227.8 to .10; Colo. Rev. Stat. § 41-6-101 (2013); Fla. Stat. § 331.501 (2013); N.M. Stat. Ann. §§ 41-14-2 to 4 (West, Westlaw through Ch. 228 (end) of the 1<sup>st</sup> Reg. Sess. Of the 51<sup>st</sup> Leg. (2013)); Tex. Civ. Prac. & Rem. Code Ann. §§ 100A.001-.003 (West, Westlaw through end of the 2013 3d Called Sess. of the 83d Leg.).

<sup>30</sup> *Id.*

<sup>31</sup> Va. Code Ann §8.01-227.10.

<sup>32</sup> *Id.* Cal. Civ. Code §§ 2210-12 (West Supp. 2013); Colo. Rev. Stat. § 41-6-101 (2013); Fla. Stat. § 331.501 (2013); N.M. Stat. Ann. §§ 41-14-2 to 4 (West, Westlaw through Ch. 228 (end) of the 1<sup>st</sup> Reg. Sess. Of the 51<sup>st</sup> Leg. (2013)); Tex. Civ. Prac. & Rem. Code Ann. §§ 100A.001-.003 (West, Westlaw through end of the 2013 3d Called Sess. of the 83d Leg.).

<sup>33</sup> *Id.*

<sup>34</sup> N.M. Stat. Ann. §§ 41-14-2 to 4 (West, Westlaw through Ch. 228 (end) of the 1<sup>st</sup> Reg. Sess. Of the 51<sup>st</sup> Leg. (2013)).

<sup>35</sup> Silver, *Houston*, at 857.

<sup>36</sup> Maria-Vittoria “Guigi” Carminati, *Is Statutory Immunity For Space Operators Good Enough*, 6 Am U. Legis. & Pol’y Brief 35, 128 (2014)

<sup>37</sup> Alp, *Limitations*, at 12 (citing Reed, *Ad Astra*, at 610 and Van C. Ernest, *Third Party Liability of the Private Space Industry: To Pay What No One Has Paid Before*, 41 Case W. Res. L. Rev. 503 (1991)).

<sup>38</sup> See Diana Alba Soular, *Spaceport America Officials push legal immunity bill*, El Paso Times, August 27, 2012, available at [http://www.elpasotimes.com/newmexico/ci\\_21413157/spaceport-america-officials-push-legal-immunity-bill](http://www.elpasotimes.com/newmexico/ci_21413157/spaceport-america-officials-push-legal-immunity-bill).