BIFURCATION OF SPACEPORT REGULATION WITHIN THE UNITED STATES

Patricia M. Sterns*
Leslie I. Tennen**
Law Offices of Sterns and Tennen, Phoenix, Arizona U.S.A.

Abstract

The promise of commercial passenger space launch systems raises significant regulatory issues. Within the United States, the federal government has taken the primary responsibility for the formulation of the rules governing the spaceports from which these passenger systems will conduct their launch and landing activities. Several of the individual states have sought to seize upon the opportunity to take a leading role in this area, and have obtained spaceport licenses from the federal government. In addition, a number of states have enacted statutes to directly or indirectly regulate the operation of commercial spaceports. This article examines and compares these regulatory frameworks on both the federal and state levels.

Introduction

Over the past several years a small but growing number of states within the United States have explored the potential benefits of establishing an operational spaceport within their borders. In February, 2001, 14 states created the National Coalition of Spaceport States to advance their common interests.¹

Five currently active licenses have been issued by the U.S. Federal Aviation Administration of the Department of Transportation (DOT): two in California, and one each in Virginia, Alaska, and Oklahoma. Rocket launches have occurred from Florida, and several other states, most notably New Mexico, are in varying stages of spaceport development.

The federal government has the primary responsibility for authorizing the operation of spaceports, however, some states have enacted specific legislation which may impact this federal authorization. It is open to question whether any individual state statute may be subject to challenge on constitutional or other grounds. State statutes may be invalidated where they seek to regulate a matter which has been pre-empted by federal law.² Even where

Report"]. The initial membership consisted of Alabama, Alaska, California, Florida, Montana, Nevada, New Mexico, Oklahoma, South Dakota, Texas, Utah, Virginia, Washington, and Wisconsin. Nebraska later joined as an associate member.

2. See U.S. CONST. Art. VI, cl. 2; Watters v. Wachovia Bank, N. A., 127 S. Ct. 1559; 167 L. Ed. 2d 389; 2007 U.S. LEXIS 4336; 75 U.S.L.W. 4176; 20 Fla. L. Weekly Fed. S 170 (2007); Cipollone v. Liggett Group, Inc., 505

^{1.} George Mason University Policy Report 63 (2002)[hereinafter referred to as the "GMU

^{*} Honorary Director IISL, Member IAA, COSPAR, AIAA

^{**} Former Commissioner Arizona Space Commission, Member IISL, IAA

^{***} Member IAF

[©] Sterns and Tennen 2008

an area has not been pre-empted, state statutes may be unenforceable where they conflict with federal law.³ Nevertheless, states have wide latitude to adopt statutes within these strictures that will withstand constitutional scrutiny. The requirements of the states for lawful adoption of statutes must, of course, be followed, as well as any requirements concerning specificity, subject matter, ambiguity, interpretation with other statutes, etc. that may exist under local law. This article will examine the licensing regime pursuant to federal statutes and regulations, as well as specific statutes adopted by individual states to govern the operation of spaceports.

Authorization by the Federal Government

The Commercial Space Launch Act (CSLA) authorizes the regulation of launch and reentry sites operated by US citizens or located within the United States.⁴ This regulatory oversight is provided within the DOT by the FAA Associate Administrator for Commercial Space Transportation (designated AST), which licenses launch sites which are not operated by the Federal government or colocated with a Federal launch facility.⁵ The CSLA seeks to promote and encourage the

U.S. 504, 516, 112 S. Ct. 2608, 120 L. Ed. 2d 407 (1992); *McCulloch v. Maryland*, 17 U.S. 316, 4 Wheat. 316, 4 L. Ed. 579 (1819); *Montalvo v. Spirit Airlines*, 2007 U.S. App. LEXIS 26146, (11-9-2007).

development of commercial launch activities by the private sector, consistent with the public health and safety, safety of property, and the national security and foreign policy interests of the United States.

The licensing process is outlined in the federal regulations, and begins with a mandatory preapplication consultation by the prospective applicant with the FAA.⁶ The confidentiality of information contained in applications for licensing is protected,7 and decisions on applications must be made within 180 days after the application is accepted by the FAA.8 The contents of a license application are specified in the regulations. In addition to basic identification of the applicant and proposed launch site, are required disclosures concerning the layout of the launch site, including launch points; the types of launch vehicles to be accommodated at each launch point; foreign ownership of the applicant; and information relating to the environmental impacts which may be associated with the operation of the proposed launch site.⁹ The applicant must demonstrate that the proposed launch operations can be conducted safely, 10 both at the launch facility as well as down range, and the regulations contain detailed criteria and specifications for the analysis of

^{3.} See U.S. v. Locke, 529 U.S. 89, 120 S. Ct. 1135, 146 L.Ed.2d 69 (2000); SPGGC, LLC v. Blumenthal, 505 F.3d. 183, 2007 U.S. App. LEXIS 24436 (2007); Wachovia Bank, N.A. v. Burke, 414 F.3d 305 (2nd Cir. 2005).

^{4. 49} U.S.C. §§ 70101 et seq; § 70105.

^{5. 14} CFR § 413.3(b)(2).

^{6. 14} CFR § 413.5.

^{7. 14} CFR §413.9.

^{8. 14} CFR § 413.15.

^{9. 14} CFR § 420.15.

^{10.} A safe launch is one in which the risk level does not exceed "an expected average number of 0.00003 casualties (Ec) to the collective member of the public exposed to hazards from the flight (Ec \le 30 × 10⁻⁶)." 14 CFR § 420.19.(a)(1).

risks.¹¹ Spaceports proposing to launch unproven vehicles are required to demonstrate safety by a clear and convincing standard.¹²

The FAA review of a license application includes an environmental assessment, and unless that assessment finds that the proposed spaceport facility will not have a significant environmental impact, the preparation of an environmental impact statement.¹³ The

13. The environmental impact analysis is to be conducted in accordance with the National Environment Policy Act, 42 U.S.C. 4321 et seq. (NEPA), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, 40 CFR Parts 1500-1508, and the FAA's Procedures for Considering Environmental Impacts, FAA Order 1050.1D. 14 CFR § 420.17(a)(2). For examples of environmental impact analyses regarding proposed spaceports, see FAA Spaceport America Draft Environmental Impact www.faa.gov/about/office org/ Statement, headquarters offices/ast/licenses permits/ht m/sw spaceport eis/media/FAA Spaceport America Draft EIS.pdf.; Blue Origins Environmental Assessment 8-29-06 [4310-13] Department of Transportation Federal Aviation Administration Finding of No Significant Impact (FONSI); Oklahoma Finding of No Impact Federal Register / Vol. 71, No. 87 / Friday, May 5, 2006 / Notices 26593; Final Environmental Assessment for the East Kern Airport District Launch Site Operator License for the Mojave Airport, Prepared for the U.S. Department of Transportation Federal Aviation Administration Office of the Associate

application review process also includes a risk analysis of the launch site and proposed operations, ¹⁴ and a determination that the issuance of the license would not jeopardize the foreign policy or national security interests of the United States. An applicant, generally, also must enter into agreements with the Coast Guard and the FAA Air Traffic Control for the issuance of a Notice to Mariners and a Notice to Airmen, respectively, prior to a launch, and such other measures as deemed necessary for the protection of the public health and safety. ¹⁵

A license to operate a launch site is valid for five years, and may be renewed. The license authorizes the operator to offer to conduct launches of a specified vehicle from a specified launch site, however, the license does not authorize any specific launches, each of which is subject to separate authorization by the government. Similarly, a launch vehicle reentry site is subject to separate licensing requirements. A licensee is

^{11. 14} CFR Part 420, Appendices A through E.

^{12. 14} CFR § 420.29.

Administrator for Commercial Space Transportation; FAA Environmental Assessment of the Kodiak Launch Complex, www.faa.gov/about/office_org/headquarters_offices/ast/licenses_permits/media/faaexec.pdf.

^{14.} See, e.g., Insurance Requirement for Maximum Probable Loss With Respect to Launch of Alliant Techsystems Inc. ALV-X1 Suborbital Launch Vehicle at Wallops Flight, Federal Register: July 24, 2007 (Volume 72, Number 141) [Notices] [Page 40338].

^{15. 14} CFR § 420.31.

^{16. 14} CFR § 420.43.

^{17. 14} CFR § 420.41.

^{18.} See generally 14 CFR part 433.

required, inter alia, to allow access by, and to cooperate with, federal officials authorized by the FAA to observe any activities of the licensee. 19 The licensee also is required to prevent unauthorized access to the launch site;²⁰ provide two days notice of all launches to surrounding land owners and local officials:²¹ and develop and implement a launch site accident investigation plan.²² A licensee is required to maintain records for three years.²³ A licensee also is required to obtain insurance or demonstrate financial responsibility,²⁴ and to implement a reciprocal waiver of claims with each of its contractors and subcontractors, each customer and each of customer's contractors subcontractors.25

The federal regulations expressly provide that "[i]ssuance of a license to operate a launch site does not relieve a licensee of its obligation to comply with any other laws or regulations; nor does it confer any proprietary, property, or exclusive right in the use of airspace or outer space."²⁶ Among the other laws and regulations which may be applicable to the licensing of launch sites are the Environmental Protection Act referenced

above,²⁷ the Clean Water Act,²⁸ the Endangered Species Act,²⁹ and the National Historic Preservation Act.³⁰ The use of the airspace above the launch site, or course, also is subject to the regulation of the FAA.³¹

The first spaceport operator's license was issued to Spaceport Systems International, L.P., in 1996, to operate the California Spaceport from Vandenberg Air Force Base.³² SSI is a limited partnership between ITT Federal Services Corporation and California Commercial Spaceport, Inc.³³ A second

28. Section 404 of the Clean Water Act, 33 U.S.C. §§ 1251, et seq., requires a finding by the Army Corps of Engineers that a proposed launch site is located within a closed basin, and that it would not affect any jurisdictional waters.

29. Section 7 of the Endangered Species Act, 16 U.S.C. §§ 1531, et seq., requires a concurrence by the Fish and Wildlife Service in the FAA's finding that a proposed launch site "is not likely to jeopardize" any listed species.

^{19. 14} CFR § 420.49.

^{20. 14} CFR § 420.53.

^{21. 14} CFR § 420.57.

^{22. 14} CFR § 420.59.

^{23. 14} CFR § 420.61.

^{24. 14} CFR § 440.9.

^{25. 14} CFR § 420.17.

^{26. 14} CFR § 420.41(c).

^{27.} See text & note 13, supra.

^{30. 16} U.S.C. §§ 470, et seq.

^{31. 14} CFR part 71.

^{32.} LSO 01-005, was renewed in 2006, and expires September 18, 2011.

^{33. 2004} Strategic Plan for Commercial Spaceport Development in Texas 31 (November, 2004) [hereinafter referred to as "Texas Governor Report"]; Maj. John W. Raymond, Airports and Spaceports a Historical Comparison 16-17 (1997) (presented to the Research Department Air Command and Staff College,

spaceport operators license in California was issued to the East Kern Airport District (EKAD) for the Mojave Airport, a former military base and current general aviation airport. This license authorizes the EKAD to launch suborbital, reusable launch vehicles, utilizing an air-drop design whereby the launch vehicle is dropped from an aircraft at a predetermined altitude.³⁴

Virginia received a license for the operation of a spaceport at the Virginia Commercial Spaceflight Center at the Wallops Flight Center.³⁵ The spaceport is operated by DynSpace, LLC, a joint venture between the Commonwealth of Virginia and DynCorp. The VSFC can launch payloads of up to 8,500 pounds into orbit on solid, liquid, or hybrid fuel vehicles.³⁶

Alaska was issued a license to operate a spaceport at the Kodiak Launch Complex on Kodiak Island as the first FAA-licensed, nonfederally owned commercial spaceport in the U.S.³⁷ The spaceport is operated by the Alaska Aerospace Development Corporation

AU/ACSC/0368/97-03); GMU Report, *supra* note 1, at 59.

- 34. East Kern Airport District Final Environmental Assessment, *supra* note 13.
- 35. LSO 02-007 Virginia Commercial Space Flight Authority Wallops VA, expires December 18, 2012.
- 36. GMU Report, *supra* note 1, at 60; Texas Governor Report *supra* note 33, at 32.
- 37. LSO 03-008 Alaska Aerospace Development Corporation, Kodiak AK, expires September 24, 2008; Alaska Aerospace Development Corporation, www.akaerospace.com.

(AADC), a public corporation established by the Alaska Legislature. The Kodiak Launch Complex can place up to 5000 pounds into orbit, and can launch up to 9 launches per year.³⁸ The KLC is located within a free trade zone, thereby permitting the importation and launch of foreign built space vehicles without paying customs duties.³⁹

The fifth currently active spaceport operator's license was issued to the Oklahoma Space Industry Development Authority (OSIDA) for the operation of a commercial launch facility at the Clinton-Sherman Industrial Airpark (CSIA) near the town of Burns Flat.⁴⁰ The Oklahoma Spaceport specializes in horizontal take-off and landing reusable launch vehicles,⁴¹ and has signed memoranda of understanding with more than a dozen companies seeking to develop that technology.⁴²

The State of Florida, has created the Florida Space Authority (FSA), which operates a commercial spaceport from former federal facilities at the CCAFS.⁴³ The Florida Cape Canaveral Spaceport is the largest and has the most diverse capabilities of any spaceport, with

^{38.} Kodiak Launch Complex Environmental Assessment, *supra* note 13, at 2.

^{39.} Texas Governor Report, *supra* note 33, at 30-32.

^{40.} LSO 06-010, expires June 11, 2011.

^{41.} Oklahoma Space Industry Development Authority (OSIDA), www.okspaceport.state.ok.us.

^{42.} Texas Governor Report, *supra* note 33, at 35.

^{43.} Id. at 31.

the ability to launch more than 11 different types of rockets.⁴⁴

The State of New Mexico has actively pursued the establishment of Spaceport America, in Sierra County approximately nine miles west of the White Sands Missile Range. The New Mexico Spaceport Authority (NMSA) proposes to conduct both horizontal and vertical launches of suborbital vehicles. Horizontal launch vehicles would land at the spaceport, while vertically launched vehicles could also land at White Sands. The spaceport seeks the capability to launch tourist flights.⁴⁵

The seven states discussed above constitute less than half of the participants in the NCSS. The remaining participating states, among others, have expressed interest in establishing a spaceport within their borders, and many states have invested substantial resources in furthering that interest. For example, the Arizona Space Commission conducted a preliminary examination of several locations which could serve as a spaceport, including a former military base, and existing aerospace facilities. Alabama's Commission on Aerospace Science & Industry has proposed a spaceport for suborbital reusable launch

Montana aggressively pursued plans to develop a commercial reusable launch vehicle site at Malstrom Air Force Base in Great Falls, and made \$20 million of general obligation bonds available for aerospace research and spaceport infrastructure development. The Montana spaceport was geared for vehicles from Rotary Rocket, and Lockheed Martin's Venturestar. The state ceased its efforts after the Venturestar program was cancelled in 2001.⁴⁹

Nevada also examined the prospect of establishing a spaceport designed for a specific vehicle, that is, the Kistler Aerospace K-1 reusable rocket. However, Kistler Aerospace relocated their planned test flights to Australia.⁵⁰ Ohio at one time considered the creation of a spaceport at a former military air base near Columbus.⁵¹ Similarly, South Dakota identified a preliminary spaceport site near Ellsworth Air Force Base, but no formal

vehicles in Baldwin County.⁴⁷ Idaho began promoting the commercial development of a spaceport in the late 1990's, but the effort was abandoned after less than two years.⁴⁸

^{44.} GMU Report, *supra* note 1, at 56. These capabilities, however, do not include the ability to reach polar orbit. Texas Governor Report, *supra* note 33, at 31.

^{45.} FAA Spaceport America Draft Environmental Impact Statement, *supra* note 13, at ES-1.

^{46.} See Sterns & Tennen, Commercial Spaceports: Preliminary Site Selection and Regulatory Considerations, 24 J. SPACE L. 29 (1996).

^{47.} Texas Governor Report, *supra* note 33, at 34; GMU Report, *supra* note 1, at 63.

^{48.} Idaho 2000 Economic Development Report, at 69.

^{49.} Texas Governor Report, *supra* note 33, at 34-35; GMU Report, *supra* note 1, at 63.

^{50.} Texas Governor Report, *supra* note 33, at 35.

^{51.} Ohio considering spaceport deal, Space News, Dec. 1, 2006, http://www.msnbc.msn.com/id/15993507/.

effort has been made to obtain a spaceport license. 52

The State of Texas has actively pursued the development of commercial spaceports within the state. The legislature authorized almost \$1 million in block grants for the Gulf Coast Regional Spaceport Development Corporation (GCRSDC) in Brazoria County, the Pecos County/West Texas Spaceport Development Corporation, and the Willacy County Development Corporation for Spaceport Facilities (WCDCSF), in partnership with the South Texas Spaceport Consortium (STSC). These Spaceport Development Corporation's are independent agencies with taxing authority and the power of "imminent (sic) domain."53 In addition, Blue Origins proposed the creation of a spaceport in Culberson County.⁵⁴ However, the Gulf Coast Regional Spaceport Development Corporation was terminated in 2007.55

The State of Utah created a Spaceport Advisory Board, which studied the possibility of launching RLV's. However, no action has been taken by the state subsequent to the cancellation of the X-33 and Venturestar programs.⁵⁶ Nevertheless, the Wah Wah Valley Interlocal Cooperation Entity has proposed a commercial spaceport near Milford

to launch single-stage to orbit reusable launch vehicles.⁵⁷

The State of Washington also examined the possibility of launching reusable vehicles such as the Venturestar. Spaceport Washington was proposed as a public/private partnership for the Grant County International Airport near Moses Lake in central Washington. However, similar to the efforts in other states, the proposal has not been actively pursued following the cancellation of the Venturestar project. Finally, a launch facility has been established in Wisconsin, near the city of Sheboygan, on Lake Michigan, for the launch of sounding rockets.

Space Commissions and Spaceports

A number of states have established space commissions with authority that may extend to the regulation of spaceports. The Alaska Aerospace Development Corporation (AADC),⁵⁹ is authorized to issue bonds,⁶⁰ adopt regulations,⁶¹ and to own and operate launch sites, payload and rocket facilities, and space business incubators.⁶² However, the AADC is statutorily precluded from utilizing the power of eminent domain.⁶³ Nevertheless, the AADC is authorized to finance or develop space related projects with any public and

^{52.} Texas Governor Report, *supra* note 33, at 35-36.

^{53.} Id. at 4.

^{54.} Blue Origins Environmental Assessment, *supra* note 13.

^{55.} The Facts.com, February 28, 2007.

^{56.} Texas Governor Report, *supra* note 33, at 36.

^{57.} GMU Report, supra note 1, at 64.

^{58.} Texas Governor Report, *supra* note 33, at 36.

^{59.} Alaska Statutes §14.40.821 et seq.

^{60.} *Id.* at § 14.40.866(a)(7).

^{61.} *Id.* at § 14.40.871(a).

^{62.} *Id.* at § 14.40.866(a)(10).

^{63.} *Id.* at § 14.40.866(6).

private entities, up to \$1,000,000, without additional legislative approval.⁶⁴ The creation of the Kodiak Launch Complex was subject to a review pursuant to the Alaska Coastal Management Program.⁶⁵

The Space Florida Act⁶⁶ created Space Florida, as a special district and subdivision of the state.⁶⁷ The purposes of Space Florida include the promotion of space enterprise, and the preservation of the unique national role of Cape Canaveral. Space Florida seeks to accomplish these goals by reducing costs and improving regulatory flexibility for commercial sector launches, while also pursuing the development of complementary sites for commercial horizontal launches.⁶⁸

Space Florida has a broad grant of authority to exercise all powers necessary or convenient to effect any or all of the purposes for which it is organized.⁶⁹ This includes owning launch vehicles and payloads;⁷⁰ issuing bonds, which are not the obligation of the state,⁷¹ but which are subject to approval of the legislature or governor and cabinet;⁷² and adopting regulations to prohibit or control pollution of

air or water.⁷³ The statutes provide that Space Florida shall assist commercial launch operators to complete and submit the documentation required for federal approval to conduct launches from the state.⁷⁴

The Wisconsin Aerospace Authority (WAA),⁷⁵ is charged with owning and operating spaceports, including the Sheboygan spaceport.⁷⁶ The WAA is empowered to issue bonds and fund any spaceport, facility or service of the authority with bond proceeds.⁷⁷ In addition, the WAA can exercise the power of eminent domain.⁷⁸ The WAA is charged with maintaining exclusive jurisdiction over spaceports, subject to the requirements of federal laws.⁷⁹ By statute, no spaceport "open to the general public" may be operated unless effective runway and landing strip lengths are properly reported, published and marked, as well as located such that "approaching and departing aircraft or spacecraft clear all public roads, highways, railroads, waterways or other traverse ways by a height which complies with applicable federal standards."80

The Wisconsin statutes contain a procedure for the issuance of a certificate of approval of spaceport locations by the secretary of transportation, based on compatibility with

^{64.} *Id.* at § 14.40.886.

^{65.} Alaska Administrative Code, Title Six, Chapter 80.

^{66.} Florida S.A. §§ 331.301, et seq.

^{67.} *Id.* at § 331.302.

^{68.} *Id.* at § 331.3011(2).

^{69.} *Id.* at § 331.305(7).

^{70.} *Id.* at § 331.305(11).

^{71.} Id. at § 331.347.

^{72.} *Id.* at § 331.305(20).

^{73.} *Id.* at § 331.320(1).

^{74.} *Id.* at § 331.3051(7)(d).

^{75.} Wisconsin S.A. §§ 114.60 *et seq*.

^{76.} *Id.* at § 114.62(10)(a).

^{77.} *Id.* at subsection (13).

^{78.} *Id.* at subsection (17).

^{79.} Id. at subsection (22).

^{80.} *Id.* at § 114.134.

other existing or planned transportation facilities in the area.⁸¹ Public hearings may be held prior to the approval, and shall be held on request of any applicant after the refusal to issue a certificate.⁸² Aerial approaches to a spaceport may be regulated and taken for safety reasons, and an aggrieved property owner has a limited period of only six months in which to submit a claim for damages or such claim is barred.⁸³

Spaceport Regulation Without a State Space Commission

Many states have statutory provisions concerning the regulation and operation of spaceports even though they do not otherwise have a form of space commission. The statutes of Montana, for example, authorize local governing bodies to create aerospace transportation districts. California, New Mexico, and Texas, on the other hand, have enacted more detailed statutory regimes for the operation of spaceports.

The California Space Enterprise Development Act⁸⁸ establishes a space enterprise development program within the Business,

Housing and Transportation Agency.89 The secretary of the agency is authorized to select a California non-profit corporation to serve as the California Spaceport Authority (CSA),90 which shall designate spaceports for launch and re-entry sites, subject to appropriate licensing of the site operator by the federal government.91 Intercity and county airport districts within the state are authorized to provide and maintain spaceports designated by the CSA. 92 These airport districts have the power to make rules, 93 and to issue bonds to purchase real property for spaceport purposes.94 Further, the California Environmental Quality Act (CEQA) must be complied with in addition to the federal environmental protection regime.

New Mexico has enacted a comprehensive statutory framework for the creation, operation and funding of spaceports. The New Mexico Spaceport Authority has been created as a state agency, although it is administratively attached to the economic development department. The NMSA is empowered to "initiate, develop, acquire, own, construct, maintain and lease space-related projects."

^{81.} Id. at § 114.134(3).

^{82.} Id. at § 114.134(4).

^{83.} Id. at § 114.135.

^{84.} Montana C.A. § 7-15-4296.

^{85.} California Government Code §§ 13999, et seq.

^{86.} New Mexico S.A. §§ 58-31-1, et seq.

^{87.} Texas V.T.C.A. Government Code, Title 83, Chapter 10, art. 5190.6, § 4E.

^{88.} California Government Code § 13999.

^{89.} Id. at § 13999.2(a).

^{90.} *Id.* at §§ 13999.2(c);(d)(1).

^{91.} Id. at § 13999.3(c).

^{92.} Id. at § 22553.

^{93.} Id. at § 22555.

^{94.} *Id.* at § 22702.

^{95.} New Mexico S.A. § 58-31-4(A).

^{96.} *Id.* at subsection (A)(4). The term "project" defined to mean "any land, building or other improvements acquired as part of a spaceport or associated with a spaceport or to

The NMSA is authorized to issue revenue bonds,⁹⁷ which are exempt from state taxes.⁹⁸

New Mexico has enacted the "Regional Spaceport District Act" by which local governments can establish and operate a spaceport. 99 Counties and municipalities may become members of a regional spaceport district pursuant to a procedure by which the governing body of the county or municipality must first adopt an ordinance imposing a "regional spaceport gross receipts tax," of not more than one-half percent. 100 The ordinance imposing the tax shall not go into effect until after it is approved by the voters in an election.101 Tax revenues may be supplemented by bonds issued by the NMSA for the operation of the spaceport. 102 The voters of Dona Ana and Sierra Counties approved a regional spaceport gross receipts tax in March, 2007, and April, 2008,

aid commerce in connection with a spaceport and all real and personal property deemed necessary in connection with the spaceport." New Mexico S.A. § 58-31-3(B).

respectively, 103 for the establishment and operation of the New Mexico Spaceport America. It is interesting to note that the New Mexico statutes define "space" as the location above 60.000 feet above mean sea level. 104

Texas has adopted statutes pursuant to which an "eligible entity" of a county or a combination of municipalities and counties may establish a corporation for the development of spaceport facilities. This corporation has broad powers which include the power of eminent domain, and which also include the authority to require the relocation or modification of a railroad, utility line, pipeline, or other facility that may interfere with a spaceport. Furthermore, the corporation has the authority to issue bonds, which, however, are not an obligation or pledge of the faith and credit of the state. 108

Finally, Hawaii's statutes include an express prohibition against the launch from within its borders of weapons of destruction or nuclear waste materials, or the use of radioactive materials as a power source in launch vehicles.¹⁰⁹

^{97.} Id. at subsection (B)(7).

^{98.} *Id.* at § 58-31-16.

^{99.} Id. at §§ 5-16-1 et seq.

^{100.} *Id.* at § 7-19D-15(A)(municipality); § 7-20E-25(A)(county).

^{101.} *Id.* at § 7-19D-15(C)(municipality); § 7-20E-25(C)(county).

^{102.} *Id.* at § 5-16-7. New Mexico Laws 2006, ch. 111, § 68, authorized \$100,000,000 in severance tax bonds for a regional spaceport in Sierra County, to be expended in increments through 2008.

^{103.} See http://spaceportamerica.com/news/press-releases/18-spaceport-press-articles/110-sierra-county-voters-app-tax.html.

^{104.} New Mexico S.A.§ 7-9-54.2(E)(3).

^{105.} Texas V.T.C.A. Government Code, Title 83, Chapter 10, art. 5190.6, § 4E.

^{106.} *Id.* at $\S 4E(c)(2)$.

^{107.} Id. at § 4E(c)(2)(B).

^{108.} Id. at § 4E(k).

^{109.} Hawaii R.S. § 201-75.