

**DEPARTMENT OF HOMELAND SECURITY**

**Transportation Security Administration**

**49 CFR Part 1540**

**Docket No. TSA-2013-0004**

**RIN 1652-AA67**

**Passenger Screening Using Advanced Imaging Technology**

**AGENCY:** Transportation Security Administration, DHS.

**ACTION:** Final rule.

**DOCUMENTS CITED IN THE PREAMBLE AND PLACED IN THE DOCKET**

**FN 1** - See also Presidential Memorandum Regarding 12/25/2009 Attempted Terrorist Attack” (Jan. 7, 2010), available at <http://www.whitehouse.gov/the-press-office/presidential-memorandum-regarding-12252009-attempted-terrorist-attack> (charging DHS with aggressively pursuing enhanced screening technology in order to prevent further such attempts while at the same time protecting passenger privacy).

**FN 2** - S. Rep. No. 110-396, at 60 (2008).

**FN 6** - Andrew R. Morral, Brian A. Jackson, “Understanding the Role of Deterrence in Counterterrorism Security,” 2009, Rand Homeland Security Program, [http://www.rand.org/content/dam/rand/pubs/occasional\\_papers/2009/RAND\\_OP281.pdf](http://www.rand.org/content/dam/rand/pubs/occasional_papers/2009/RAND_OP281.pdf).

**FN 7** - [http://www.whitehouse.gov/omb/circulars\\_a004\\_a-4/](http://www.whitehouse.gov/omb/circulars_a004_a-4/).

**FN 9** - See Privacy Impact Assessment Update for TSA Advanced Imaging Technology (DHS/TSA/PIA-032(d)) December 18, 2015, <https://www.dhs.gov/sites/default/files/publications/privacy-tsa-pia-32-d-ait.pdf>.

**FN 11** - These individuals currently can receive some form of expedited screening, are permitted to leave their shoes, light jackets, and headwear on for screening, and are screened primarily by the Walk-Through Metal Detector (WTMD). See <https://www.tsa.gov/travel/special-procedures>, <https://www.tsa.gov/travel/special-procedures/traveling-children>.

**FN 12** - <http://www.tsa.gov/tsa-precheck>.

**FN 13** - <http://www.tsa.gov/tsa-precheck>. See also *Ruskai v. Pistole*, 775 F.3d 61, 64 (1st Cir. 2014) (“Additionally, TSA has opted to impose more limited screening burdens on passengers whom it confirms are part of TSA’s PreCheck program. As described in the briefing, PreCheck offers passenger members ‘expedited screening in designated lanes if they have been cleared for such screening based on certain background checks conducted prior to their arrival at the airport,’ and a more limited pat-down in the event that the passenger alarms a WTMD.”).

**FN 24** - 49 U.S.C. 44925(a) and (b). “Detection Equipment at Airport Screening Checkpoints,” Report to Congress, Aug. 9, 2005. See also 78 FR 18292.

**FN 29** - John S. Pistole, TSA Administrator, address at the Airports Council International–North America (Aug. 14, 2013). Text available at <https://www.tsa.gov/news/speeches/airports-council-international-%E2%80%93-north-america-tsa-administrator-john-s-pistole-0>.

**FN 36** - See, e.g., “Detection Equipment at Airport Screening Checkpoints,” Report to Congress, Aug. 9, 2005. The report describes TSA’s ongoing research and development program to develop technologies to increase its ability to detect explosives on passengers, including body imaging systems, i.e., backscatter x-ray.

**FN 37** - See The TSA is seeking sources for Imaging Technology systems, Solicitation No. HSTS04-08-R-CT2056,  
<https://www.fbo.gov/index?s=opportunity&mode=form{id=be7cd5b087bd3d28ce6bee81f7644141&tab=core&cview=1>.

**FN 38** - Privacy Impact Assessment for TSA Whole Body Imaging,” Jan. 2, 2008. Updates to the initial AIT PIA were conducted on Oct. 17, 2008, Jul. 23, 2009, and Jan. 25, 2011. See <http://www.dhs.gov/publication/dhstsapia-032-advanced-imaging-technology>. All TSA PIA reports are available at <http://www.dhs.gov/privacy-documents-transportation-security-administration-tsa>.

**FN 39** - “Advanced Imaging Technologies: Passenger Privacy Protections,” Fiscal Year 2010 Report to Congress, February 25, 2010.

**FN 40** - <https://www.tsa.gov/contact>.

**FN 62** - More information on TSA Civil Rights is available at <https://www.tsa.gov/travel/passenger-support/civil-rights>.

**FN 63** - United States Government Accountability Office, “Aviation Security: Vulnerabilities Exposed Through covert Testing of TSA’s Passenger Screening Process,” GAO-08-48T (Nov. 15, 2007).

**FN 64** - United States Government Accountability Office, “Aviation Security: TSA is Increasing Procurement and Deployment of the Advanced Imaging Technology, but Challenges to This Effort and Other Areas of Aviation Security Remain,” GAO-10-484T (Mar. 17, 2010).

**FN 67** - <http://science.howstuffworks.com/millimeter-wave-scanner4.htm>; <http://cnsnews.com/news/article/us-paid-full-body-scanners-nigeria-s-four-international-airports-2007>.

**FN 69** - European Commission, Press Release, “Aviation Security: Commission Adopts New Rules on the Use of Security Scanners at European Airports,” Brussels, Belgium (Nov. 14, 2011). The countries referenced by several commenters (Germany, Ireland, and Italy) are members of the European Union.

**FN 71** - U.S. Government Accountability Office Report to Congressional Requesters, “Advanced Imaging Technology: TSA Needs Additional Information before Procuring Next-Generation Systems,” GAO-14-357, March 2014.

**FN 73** - The Inspector General of DHS recently conducted covert testing of TSA aviation security screening and the Secretary has directed TSA to undertake a number of steps to enhance security capabilities and techniques. See, e.g., Statement by Secretary Jeh C. Johnson On Inspector General Findings on TSA Security Screening, Press Release, Jun. 1, 2015. TSA’s response to the Inspector General’s findings and the changes TSA has implemented to address those findings were discussed in the testimony of TSA Administrator, Peter V. Neffenger, before the Senate Committee on Appropriations, Subcommittee on Homeland Security on Sep. 29, 2015. See <https://www.tsa.gov/news/testimony/2015/09/29/testimony-tsa-efforts-address-oig-findings>.

**FN 75** - 78 FR 18295. See also, <https://www.tsa.gov/FOIA>.

**FN 76** - Department of Homeland Security, Office of Inspector General, “Transportation Security Administration’s Use of Backscatter Units,” OIG-12-38, Feb. 2012 at p.5.

**FN 77** - “Radiation Dose from Airport Scanners,” American Association of Physicists in Medicine, AAPM Report No. 217 (2013). Available at <http://www.aapm.org/pubs/reports/>.

**FN 78** - National Academies of Sciences, Engineering, and Medicine. Airport Passenger Screening Using Backscatter X-Ray Machines: Compliance with Standards (2015), available at <http://www.nap.edu/21710>.

**FN 79** - TSA disagrees with the comments that attempted to link AIT to skin cancer, for the reasons explained in this preamble. TSA notes that according to the Stanford Medicine Cancer Institute, ultraviolet radiation from the sun is the main cause of skin cancer.

<http://stanfordhealthcare.org/medical-conditions/cancer/skin-cancer/causes-skin-cancer/ultraviolet-radiation.html>. There is no evidence that AIT is related to the incidence of skin cancer.

**FN 80** - FDA, “Products for Security Screening of People,” available at <http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/SecuritySystems/ucm227201.htm>

**FN 81** - <https://www.tsa.gov/FOIA>.

**FN 83** - The SCENIHR is an independent committee that provides the European Commission with the scientific advice it needs when preparing policy and proposals relating to consumer safety, public health, and the environment. The committee is made up of external experts. See SCENIHR (Scientific Committee on Emerging and Newly Identified Health Risks), Health effects of security scanners for passenger screening (based on X-ray technology), 26 April 2012.

**FN 84** - “Compilation of Emission Safety Reports on the L3 Communications, Inc. ProVision 1000 Active Millimeter Wave Advanced Imaging Technology (AIT) System,” Sept. 2012. See, [www.dhs.gov/advanced-imaging-technology-documents](http://www.dhs.gov/advanced-imaging-technology-documents).

**FN 86** - Privacy Impact Assessment Update for TSA Advanced Imaging Technology, Jan. 25, 2011, [www.dhs.gov/xlibrary/assets/privacy/privacy-pia-tsa-ait.pdf](http://www.dhs.gov/xlibrary/assets/privacy/privacy-pia-tsa-ait.pdf).

**FN 87** - <https://www.tsa.gov/travel/travel-tips>.

**FN 92** - <https://www.tsa.gov/travel/frequently-asked-questions>.

**FN 93** - <https://www.tsa.gov/travel/special-procedures/traveling-children> and <https://www.tsa.gov/travel/special-procedures/screening-passengers-75-and-older>.

**FN 94** - <https://www.tsa.gov/travel/passenger-support>.

**FN 95** - More information on TSA Civil Rights is available at <https://www.tsa.gov/travel/passenger-support/civil-rights>.

**FN 96** - <https://www.tsa.gov/travel/security-screening>.

**FN 99** - <https://www.tsa.gov/tsa-precheck>.

**FN 100** - <https://www.tsa.gov/travel/frequently-asked-questions>.

**FN 101** - <https://www.tsa.gov/travel/special-procedures>

**FN 104** - <https://www.tsa.gov/travel/special-procedures>.

**FN 105** - 78 FR 18295. See also, <https://www.tsa.gov/FOIA>.

**FN 106** - Compilation of Emission Safety Reports on the L3 Communications, Inc. ProVision 100 Active Millimeter Wave Advanced Imaging Technology (AIT) System, Version 2, DHS/ST/TSL-12/118, page v, September 1, 2012, available at <http://www.dhs.gov/sites/default/files/publications/tsa-compilation-of-emission-safety-reports-on-the-l3-communications-inc-ait-system.pdf>.

**FN 107** - More information on TSA Civil Rights is available at <https://www.tsa.gov/travel/passenger-support/civil-rights>.

**FN 113** - See for example, [www.tsa.gov/travel/security-screening](http://www.tsa.gov/travel/security-screening) and [www.tsa.gov/travel/special-procedures](http://www.tsa.gov/travel/special-procedures).

**FN 114** - The FDA has found that millimeter wave is safe and states on its website “[m]illimeter wave security systems which comply with the limits set in the applicable national non-ionizing radiation safety standard . . . cause no known adverse health effects.”

<http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/SecuritySystems/ucm227201.htm>.

**FN 115** - Department of Infrastructure and Transport, Australian Government, “Optimal Technologies Proof of Concept Trial Report,” Feb. 28, 2012.

**FN 116** - U.S. Department of Transportation, “Revised Departmental Guidance on Valuation of Travel Time in Economic Analysis,” Sep. 28, 2011. DOT estimates an hourly rate of \$42.10 in table 4 of this report and TSA inflated this estimate to 2011 dollars at \$43.44. [http://www.dot.gov/sites/dot.dev/files/docs/vot\\_guidance\\_092811c.pdf](http://www.dot.gov/sites/dot.dev/files/docs/vot_guidance_092811c.pdf).

**FN 117** - Page 32 of OMB Circular A-4 states: “In presenting the stream of benefits and costs, it is important to measure them in constant dollars to avoid the misleading effects of inflation in your estimates.”

**FN 119** - Blalock, Garrick, Kadiyali, Vrinda, Simon, and Daniel H., “The Impact of Post 9/11 Airport Security Measures on the Demand for Air Travel,” Journal of Law and Economics, Apr. 30, 2007, [http://dyson.cornell.edu/faculty\\_sites/gb78/wp/JLE\\_6301.pdf](http://dyson.cornell.edu/faculty_sites/gb78/wp/JLE_6301.pdf).

**FN 120** - Andrew R. Morral, Brian A. Jackson., “Understanding the Role of Deterrence in Counterterrorism Security,” 2009, Rand Homeland Security Program, [http://www.rand.org/content/dam/rand/pubs/occasional\\_papers/2009/RAND\\_OP281.pdf](http://www.rand.org/content/dam/rand/pubs/occasional_papers/2009/RAND_OP281.pdf).

**FN 125** - [http://www.whitehouse.gov/omb/circulars\\_a004\\_a-4/](http://www.whitehouse.gov/omb/circulars_a004_a-4/).

**FN 129** - [http://www.whitehouse.gov/omb/circulars\\_a004\\_a-4/](http://www.whitehouse.gov/omb/circulars_a004_a-4/).

**FN 130** - U.S. Department of Transportation, Bureau of Transportation Statistics, “T-100 Data bank.” [http://www.transtats.bts.gov/DatabaseInfo.asp?DB\\_ID=111](http://www.transtats.bts.gov/DatabaseInfo.asp?DB_ID=111).

**FN 131** - U.S. Department of Transportation, Bureau of Transportation Statistics, “T-100 Domestic Segment (All carriers) Data bank,”

[http://www.transtats.bts.gov/DL\\_SelectFields.asp?Table\\_ID=311&DB\\_Short\\_Name=Air](http://www.transtats.bts.gov/DL_SelectFields.asp?Table_ID=311&DB_Short_Name=Air).  
Selected fields: DepPerformed, Aircraft Type, and Year = 2014, All months.

**FN 133** - U.S. Department of Transportation, Bureau of Transportation Statistics, “T-100 Domestic Segment (All carriers) Data bank,”

[http://www.transtats.bts.gov/DL\\_SelectFields.asp?Table\\_ID=311&DB\\_Short\\_Name=Air](http://www.transtats.bts.gov/DL_SelectFields.asp?Table_ID=311&DB_Short_Name=Air).  
Selected fields: Seats, Passengers, Aircraft Type, and Year = 2014, All months.

**FN 134** - Airbus.com, “A380 Dimensions & Key Data.” Accessed Aug. 12, 2015.

<http://www.airbus.com/aircraftfamilies/passengeraircraft/a380family/specifications/>.

**FN 136** - Airbus.com, “New Airbus aircraft list prices for 2015,”

<http://www.airbus.com/newsevents/news-events-single/detail/new-airbus-aircraft-list-prices-for-2015/>.

**FN 137** - Boeing.com, “777-200/-200ER Technical Characteristics.” Accessed Aug. 12, 2015.

[http://www.boeing.com/boeing/commercial/777family/pf/pf\\_200product.page](http://www.boeing.com/boeing/commercial/777family/pf/pf_200product.page).

**FN 139** - Boeing.com, “Commercial Airplanes Jet Prices, 2014 price,”

<http://www.boeing.com/boeing/commercial/prices/>.

**FN 140** - Boeing.com, “737-700 Technical Characteristics.” Accessed Aug. 12, 2015.

[http://www.boeing.com/boeing/commercial/737family/pf/pf\\_700tech.page](http://www.boeing.com/boeing/commercial/737family/pf/pf_700tech.page).

**FN 141** - Boeing.com, “Commercial Airplanes Jet Prices, 2014 price,”

<http://www.boeing.com/boeing/commercial/prices/>.

**FN 142** - Boeing.com, “737-800 Technical Characteristics.” Accessed Aug. 12, 2015.

[http://www.boeing.com/boeing/commercial/737family/pf/pf\\_800tech.page](http://www.boeing.com/boeing/commercial/737family/pf/pf_800tech.page)?

**FN 143** - Boeing.com, “Commercial Airplanes Jet Prices, 2014 price,”

<http://www.boeing.com/boeing/commercial/prices/>.

**FN 144** - Airbus.com, “A320 Setting single aisle standards, Dimensions & Key Data.” Accessed August 12, 2015.

<http://www.airbus.com/aircraftfamilies/passengeraircraft/a320family/a320/specifications/>.

**FN 146** - Airbus.com, “New Airbus aircraft list prices for 2015,”

<http://www.airbus.com/newsevents/news-events-single/detail/new-airbus-aircraft-list-prices-for-2015/>.

**FN 148** - U.S. Department of Transportation, “Guidance on Treatment of Economic Value of a Statistical Life in U.S. Department of Transportation Analyses,”

<http://www.dot.gov/sites/dot.dev/files/docs/VSL%20Guidance%202013.pdf>.

**FN 150** - McGrory, Michael, “Airlines Not Liable for Colgan Air Crash Clean-Up Costs; SmithAmunden Aerospace Report,” March 20, 2013, <http://www.salawus.com/insights-alerts-70.html>.

**FN 152** - <http://www.whitehouse.gov/the-press-office/presidential-memorandum-regarding-12252009-attempted-terrorist-attack>.

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**FN 121** - Frank Ackerman and Lisa Heinzerling, “Priceless: On Knowing the Price of Everything and the Value of Nothing,” 136-137 (2004).

**FN 122** - Nick Pidgeon, Roger E. Kasperson, and Paul Slovic, “The Social Amplification of Risk,” p.16, (2003).

**FN 147** - Cass R. Sunstein, “Laws of Fear,” p. 127, 2005.