Rolls-Royce North America Inc.
Vice President, Global Trade Compliance
1875 Explorer Street, Suite 200
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February 7, 2011

Via the Rule Making Portal: http://www.regulations.gov (BIS-2010-0038)
Via email: publiccoments.bis.doc.gov

Or Via Mail

Regulatory Policy Division
Bureau of Industry and Security
Department of Commerce
1401 Constitution Avenue, N.W., Room 2705
Washington, DC 20230

RE: RIN 0694–AF03 (Proposed Rule: Request for Public Comments on Strategic Trade Authorization License Exception) (75 Fed. Reg. 76,653)

Dear Mr. Arvin:

Rolls-Royce North America appreciates the opportunity to comment on the Strategic Trade Authorization License Exception (STA Exception) being proposed by the Department of Commerce.

Rolls-Royce technology presently controlled by the Department of Commerce includes Civil Aerospace, Civil Marine and Energy, and includes a global customer base and supply chain. Our initial review suggests that the STA Exception would benefit us, though it might push some regulatory burden downstream.

The following table summarizes our findings. Detailed comments follow and are included in the **Attachment A**.

	Rolls-Royce Tiering Recommendation		
ECCN	**Tier 1**	**Tier 2**	**Tier 3**
1C007		X	
1E001		X	
1E101		X	
2E003.a		X	
2E003.b.1.a - c		X	
2E003.b.2.a		X	

2E003.b.2.b.1 - 3		X	
2E003.b.2.c.1 - 2			X
2E003.b.2.d.1 - 3			X
2E003.d		X	
2E003.f		X	
9A001		X	
9A001.a		X	
9D003		X	X
9E003.a.1		X	
9E003.a.2		X	
9E003.a.3.a - c		X	
9E003.a.4		X	
9E003.a.5		X	
9E003.a.6		X	
9E003.a.7		X	
9E003.a.8		X	
9E003.a.10.a - c		X	
9E003.a.11		X	
9E003.c.1.a - c		X	
9E003.c.2.a - c		X	
9E003.h.1 - 3		X	X
9E003.i		X	

Comment One: Tier 1 of the Strategic Trade Authorization License Exception

Tier 1 authorization would allow items subject to any (or all) of seven reasons for control, as listed below, to be exported without an individual export license, to 37 destinations.

Reasons for control:

National Security (NS)
Nuclear nonproliferation (NP)
Encryption items (EI)
Significant items (SI)
Chemical or biological weapons (CB)
Regional stability (RS)
Crime Control (CC)

37 destinations:

Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, Ukraine, or the United Kingdom.

Based on our initial review, Rolls-Royce concludes that none of the ECCNs listed in the summary table above meets the standard of "WMD and items made almost exclusively in US and which provide critical military or intelligence advantage." Therefore, Rolls-Royce does not currently have any technology or products that are falling under Tier 1 of the proposed STA Exception.

Comment Two: Tier 2 of the STA Exception

Tier 2 authorizations would allow less sensitive items subject to control for national security (NS) reasons to be exported to two additional destinations (37 + 2) (Albania and Israel).

Rolls-Royce believes that most of the ECCNs that our company licenses have foreign availability, and so would warrant the use of the STA Exception and fall under Tier 2 of the STA Exception. Please refer to the **Attachment A** for details.

Comment Three: Tier 3 of the STA Exception

Tier 3 authorizations would allow the least sensitive items subject to control for only national security (NS) reasons to go to 125 additional destinations for civil end-use.

Rolls-Royce believes that ECCNs 2E003.b.2.c.1-2, 2E003.b.2.d.1-3, and 9E003.h, all covering application software, non-control laws (not operating systems software) should be classified as Tier 3 technology as it is available in a wide variety of countries including Canada, France, Germany, India and the United Kingdom.

Comment Four: Conditions / Compliance Requirements that Apply to License Exception STA

(1) **Requirement to furnish Export Control Classification Number – (i) and (ii)**
Condition one is a perfectly reasonable expectation, and is the type of information that Rolls-Royce should already have on hand prior to any transaction.

(2) **Prior Consignee Statement – (i) to (vi)**
Rolls-Royce believes that this condition would transfer compliance responsibilities to the foreign parties and put the requirements of their sharing approved technology with additional parties/countries. Documentation does not need to be shared with the US company each time, but is required to be provided to Commerce upon request.

Comment Five: Clarification regarding "Deemed Export" and "Deemed Re-export"

Rolls-Royce assumes the proposed STA Exception will apply to foreign national employees working for US companies, as well as foreign national employees working for non-US entities in the US or abroad. Under this assumption, the proposed STA Exception would remove a great deal of burden from a licensing standpoint on US companies and push some of the responsibility to the foreign parties involved on the licenses. We suggest the concepts of "deemed export" and "deemed re-export" to be added to and specifically stated in the proposed STA Exception.

Summary

As this response will be made public [RIN 0694–AF03 (Proposed Rule: Request for Public Comments on Strategic Trade Authorization license Exception) (75 Fed. Reg. 76,653)], Rolls-Royce has not currently provided marketing comparison data on our products versus foreign competitors. Rolls-Royce would be willing to discuss these types of data with the Department of Commerce at a future date.

Sincerely,

William Jeff Merrell
Vice President, Global Trade Compliance
Rolls-Royce North America Inc.

Enclosure: Attachment A

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ECCN	DESCRIPTION	Civil engines using items under these ECCNs	Foreign Availability (including names & countries)	Engineering Notes	TIER 1 WMD and items made almost exclusively in the US which provide critical military or intelligence advantage	TIER 2 Items providing a substantial military or intelligence advantage to US, and made by US regine partners and allies	TIER 3 Items broadly available and provide a significant military or intelligence advantage to the US
1C007	Ceramic base materials, non-"composite" ceramic materials, ceramic-"matrix" "composite" materials and precursor materials as follows: **see sheet 2**	None in production CFM56 demo has CMC LP turbine blades	Sulzer Eldin (Netherlands) France - SPS (SiC, C/C CMCs) Germany - SGL (SiC, C/C CMCs) France - SPS (SiC, C/C CMCs) - LP turbine blades (Leap56), exhaust nozzle (M88), nozzle flaps (F100), exhaust plug, mixer, CFM56 combustor. C/C up to 2700C. Germany - SGL (SiC, C/C CMCs) 1C002 - TiAl Institute of Metal Research - China - Centrifugally Cast Impeller MTU - Germany - LP Turbine blades for PW GTF geared turbofan, GENX engine Kyocera - Japan			X	
1E001	Technology according to the General Technology Note for the "development or "production" of items controlled by 1A001.b, 1A001.c, 1A003, 1A004, 1A005, 1A101, 1B (except 1B999), or 1C (except 1C355, 1C980 to 1C984, 1C988, 1C990, 1C991, 1C992, 1C995 to 1C999)						
1E101	Technology in accordance with the GTN, for the "use" of commodities and software controlled by 1A101, 1A102, 1B001, 1B101, 1B102, 1B115 to 1B119, 1C001, 1C007, 1C011, 1C101, 1C107, 1C111, 1C116, 1C117, 1C118, 1D001, 1D101 or 1D103						
2E003	Other "technology", as follows (see List of Items Controlled).						
2E003	a. "Technology" for the "development" of interactive graphics as an integrated part in "numerical control" units for preparation or modification of part programs;	on-machine measure and associated adaptive machinining of Aero engines and other non-aero applications	Siemens NX - Commercially availalble-Europe and other Countries			X	
	b. "Technology" for metal working manufacturing processes, as follows:						
	b.1. "Technology" for the design of tools, dies or fixtures specially designed for any of the following processes: b.1.a. "Superplastic forming"; b.1.b. "Diffusion bonding"; or b.1.c. "Direct acting hydraulic pressing";	RR Trent engines	Rolls-Royce plc - UK (SPF/DB titanium fan blades)			X	
	b.2. Technical data consisting of process methods or parameters as listed below used to control: b.2.a. "Superplastic forming" of aluminum alloys, titanium alloys or "superalloys":	RR Trent engines	Rolls-Royce plc - UK (SPF/DB titanium fan blades)			X	
	b.2.b. "Diffusion bonding" of "superalloys" or titanium alloys: b.2.b.1. Surface preparation; b.2.b.2. Temperature; b.2.b.3. Pressure;	RR Trent engines	Rolls-Royce plc - UK (SPF/DB titanium fan blades)			X	
	b.2.c. "Direct acting hydraulic pressing" of aluminum alloys or titanium alloys: b.2.c.1. Pressure; b.2.c.2. Cycle time;						X

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2E003	b.2.d. "Hot isostatic densification" of titanium alloys, aluminum alloys or "superalloys": b.2.d.1. Temperature; b.2.d.2. Pressure; b.2.d.3. Cycle time;						X
	d. "Technology" for the "development" of generators of machine tool instructions (e.g., part programs) from design data residing inside "numerical control" units;	on-machine measure and associated adaptive machinining of Aero engines and other non-aero applications	Siemens NX - Commercially availalble-Europe and other Countries			X	
	f. "Technology" for the application of inorganic overlay coatings or inorganic surface modification coatings (specified in column 3 of the following table) to non electronic substrates (specified in column 2 of the following table), by processes specified in column 1 of the following table and defined in the Technical Note.					CVD, CVI, PVD PE, PECVD	
9A001	9A001 Aero gas turbine engines having any of the following (see List of Items Controlled).					X	
9A001.a	a. Incorporating any of the technologies controlled by 9E003.a or 9E003.h; or					X	
	Note: 9A001.a. does not control aero gas turbine engines which meet all of the following: a. Certified by the civil aviation authority in a country listed in Supplement No. 1 to Part 743; and b. Intended to power non military manned aircraft for which any of the following has been issued by a Participating State listed in Supplement No. 1 to Part 743 for the aircraft with this specific engine type: b.1. A civil type certificate; or b.2. An equivalent document recognized by the International Civil Aviation Organization (ICAO).					X	
9A001.b	b. Designed to power an aircraft designed to cruise at Mach 1 or higher, for more than 30 minutes.	RR Olympus	Rolls-Royce plc - UK (Concorde eng)			X	
9D003	"Software" specially designed or modified for the "use" of "Full Authority Digital Electronic Engine Control Systems" ("FADEC Systems") for propulsion systems controlled by 9A (except 9A018, 9A990 or 9A991) or equipment controlled by 9B (except 9B990 or 9B991), as follows (see List of Items Controlled).	RR civil products include Trent XWB, Trent 1000, Trent 900, Trent 800, Trent 700, Trent 500, RB211-524, RB211-535, International Aero Engines V2500, AE 2100, AE 3007, BR700, BR725, Tay, FJ44, RR500, M250, and CTS800.	Mannerino SW - Canada Hispano Suiza - France AEC - UK RRD - Germany RR plc - UK Thales - UK HAL - India (under development)	All foreign 'fly-by-wire' or FADEC controlled engines. All foreign countries throughout the world holding said technology including Europe (includes UK, France, Germany, etc), Asia (includes China, Russia, Korea, Japan, Singapore, Malaysia, and Middle East [Israel, Iran, Iraq, Syria], etc), Africa, and of course the Americas.		Control Laws (Unique to specific engines - military or civil) Application Software Source Code (excluding Tier 1)	Application Software Object Code Operating System Software
	9E003 Other "technology" as follows (see List of Items Controlled).						

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9E003	a. "Technology" "required" for the "development" or "production" of any of the following gas turbine engine components or systems:						
	a.1. Gas turbine blades, vanes or tip shrouds, made from directionally solidified (DS) or single crystal (SC) alloys and having (in the 001 Miller Index Direction) a stress rupture life exceeding	Rolls-Royce Trent, Rolls-Royce BRxxx, Snecma Silvercrest (demo), Powerjet SAM146	Rolls-Royce plc - UK (SC & DS) Howmet - UK (SC & DS) Howmet UK and France PCC in the UK at AETC Doncasters in Bochum has SX capability. P&W's facility in Poland is an SX foundry. Rolls-Royce has SX capability in the UK and Italy (civil and military) EMA in Italy manufactures SX IGT bits Snecma may have SX capability in France (military and civil). Precicast has SX capability in Switzerland. Hindustan Aeronautics in Koraput (India) has SX capability. Plants in Russia supporting the Russian engine programs (civil and military) China has three SX plants (Anshun, Shenyang (Liming) and Xi'an (XAE). These are for military bits as there is no civil program at the moment. AIDC in Taiwan may have SX capability as they have an equiax facility.	SX casting is not particularly secret as it can be read about in books. The key is the methoding knowhow around complex geometries and newer casting alloys.		X	
	a.2. Multiple domed combustors operating at average burner outlet temperatures exceeding 1,813 K (1,540° C) or combustors incorporating thermally decoupled combustion liners, non metallic liners or non metallic shells;	Trent 500, Trent 900, Trent 1000	Rolls-Royce plc - UK (SC & DS)	Thermally decoupled Pedestal Tiles liners		X	
	a.3. Components manufactured from any of the following: a.3.a. Organic "composite" materials designed to operate above 588 K (315°C); a.3.b. Metal "matrix" "composite", ceramic "matrix", intermetallic or intermetallic reinforced materials, controlled by 1C007; or a.3.c. "Composite" material controlled by 1C010 and manufactured with resins controlled by 1C008;	None in production CFM56 demo has CMC LP turbine blades Industrial RB211	France - SPS (SiC, C/C CMCs) - LP turbine blades (Leap56), exhaust nozzle (M88), nozzle flaps (F100), exhaust plug, mixer, CFM56 combustor. C/C up to 2700C. Germany - SGL (SiC, C/C CMCs) Safran - France - 3D woven composite fan blade Sulzer Eldim - Netherlands, manufactures CMC (oxide or SiC/SiC) flaps for F100s (F-16s). Ox/Ox based ceramic liner	Development phase HTOMC's currently used for cases and vanes for F135 and F119 (both P&W in USA)		X	
	a.4. Uncooled turbine blades, vanes, tip shrouds or other components, designed to operate at gas path total (stagnation) temperatures of 1,323 K (1,050°C) or more at sea-level static take-off (ISA) in a 'steady state mode' of engine operation;					X	

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	a.5. Cooled turbine blades, vanes or tip shrouds, other than those described in 9E003.a.1, exposed to gas path total (stagnation) temperatures of 1,643 K (1,370°C) or more at sea-level static take-off (ISA) in a 'steady state mode' of engine operation;	Rolls-Royce Trent, Rolls-Royce BRxxx, Snecma Silvercrest (demo), Powerjet SAM146	Rolls-Royce plc - England and Germany Snecma - France NPO - Russia			X	
	a.6. Airfoil to disk blade combinations using solid state joining; 400 hours at 1,273 K (1,000°C) at a stress of 200 MPa, based on the average property values;	None				X	
	a.7. Gas turbine engine components using "diffusion bonding" "technology" controlled by 2E003.b;	RR Trent engines Tay 611	Rolls-Royce - UK (SPF/DB fan blades) UK, Germany	Diffusion Bonded Trasply cooled liners		X	
	a.8. Damage tolerant gas turbine engine rotating components using powder metallurgy materials controlled by 1C002.b;	Trent 1000, XWB	Rolls-Royce - England (RR1000)			X	
	a.10. Adjustable flow path geometry and associated control systems for: a.10.a. Gas generator turbines; a.10.b. Fan or power turbines; a.10.c. Propelling nozzles; or	WR21	Rolls-Royce - England (variable flow LPT design)			X	
	a.11. Hollow fan blades;	All RR Trent and RB211 fans.	RR - UK			X	
	c. "Technology" "required" for the "development" or "production" of gas turbine engine components using "laser", water jet, Electro Chemical						
	c.1. All of the following: c.1.a. Depths more than four times their diameter; c.1.b. Diameters less than 0.76 mm; and c.1.c. 'Incidence angles' equal to or less than 25 degrees; or	Trent 800, BR710, BR715 Z-Ring liners	UK and Germany	The cooling holes are drilled using Lasers and water jet technologies		X	
	c.2. All of the following: c.2.a. Depths more than five times their diameter; c.2.b. Diameters less than 0.4 mm; and c.2.c. 'Incidence angles' of more than 25 degrees;					X	
003	h. "Technology" for gas turbine engine "FADEC systems" as follows:						

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9E	h.1. "Development" "technology" for deriving the functional requirements for the components necessary for the "FADEC system" to regulate engine thrust or shaft power (e.g., feedback sensor time constants and accuracies, fuel valve slew rate); h.2. "Development" or "production" "technology" for control and diagnostic components unique to the "FADEC system" and used to regulate engine thrust or shaft power; h.3. "Development" "technology" for the control law algorithms, including "source code", unique to the "FADEC system" and used to regulate engine thrust or shaft power.	RR civil products include Trent XWB, Trent 1000, Trent 900, Trent 800, Trent 700, Trent 500, RB211-524, RB211-535, International Aero Engines V2500, AE 2100, AE 3007, BR700, BR725, Tay, FJ44, RR500, M250, and CTS800.	Mannerino SW - Canada Hispano Suiza - France AEC - UK RRD - Germany RR plc - UK Thales - UK HAL - India (under development)	All foreign 'fly-by-wire' or FADEC controlled engines. All foreign countries throughout the world holding said technology including Europe (includes UK, France, Germany, etc), Asia (includes China, Russia, Korea, Japan, Singapore, Malaysia, and Middle East [Israel, Iran, Iraq, Syria], etc), Africa, and of course the Americas.		Control Laws (Unique to specific engines - military or civil) Application Software Source Code (excluding Tier 1)	Application Software Object Code Operating System Software Electronics Hardware, including design details, optimization, manufacturing know how All non-FADEC control system hardware
	i. "Technology" not otherwise controlled in 9E003.a.1 through a.8, a.10, and .h and used in the "development", "production", or overhaul of hot section parts and components of civil derivatives of military engines controlled on the USML					X	