APPENDIX *5*

STRATEGIC LIST MATERIALS

A. GENERAL. Strategic List Items are dual-use (commercial and military) items under the export control jurisdiction of the Bureau of Export Administration (BXA), U.S. Department of Commerce, which have been assigned a code letter "A" or "B" following the Export ***Control Classification*** Number (ECCN) on the ***Commerce*** Control List (CCL), Section 799.1, of the Export Administration Regulations (EAR), 15 CFR. These commodities are controlled for reasons of national security, foreign policy ***controls***, nuclear proliferation, ***missile technology, chemical or biological warfare, and*** short supply (resource assessment) DoD item/technical managers/***equipment specialists*** will assign a demilitarization code of "Q" to these items if they fall **outside** of the criteria of a Munitions List Item. Items which fall outside of the criteria for both Munitions and Strategic List Items will be assigned a demilitarization code of "A."

NOTE: The Munitions List always takes precedence over the Strategic List. This Appendix and the related EAR will be used only when an item does not meet the criteria for a Munitions List Item.

B. COMMODITY CONTROL LIST. The following is the United States ***Commerce*** Control List, excerpted from the U.S. Export Administration Regulations, ***15 CFR, Part 799.1***. This list is included for general guidance in identifying commodities which are Strategic List Items (SLI). Final determination must be based on a review of the specific commodity interpretation in 15 CFR, Part 799.1, and a commodity listed in this section must not be construed as all inclusive (e.g., Absorbers, electromagnetic wave, ECCN ***1C01A***, include only those which have frequencies exceeding 2 X 10^8 Hz and less than 3 X 10^{12} Hz, with three exceptions).

C. THE EXPORT ADMINISTRATION REGULATIONS. The U.S. Export Administration Regulations are updated several times a year with publication of Export Administration Bulletins and a complete printing is produced annually. To obtain a copy of the U.S. Export Administration Regulations and all subsequent Export Administration Bulletins, contact the Department of Commerce, (202) 482-4811, Ext. 0. Annual subscription rate is $94, there is no charge to DoD activities.

COMMODITY DESCRIPTION	ECCN
A-D and D-A converters	***3A01A***
Absorbers, electromagnetic wave	***1C01A***
Absorbers, hair type	***1C01A***
Absorbers, planar	***1C01A***
Accelerators, electron	***2A54B***
Accelerators, particle	***2A54B***
Accelerometers	***7A01A***
Acoustic underwater communications	***5A02A***
Acoustic underwater detection devices	***6A18A***
Acoustic wave devices	***3A01A***
Acoustics	***6A01A***
Active magnetic bearing systems	***2A05A***
Adaptive radios	***5A02A***
Aero-engines & parts	***9A01A***
Air independent power systems	***8A02A***
Airborne laser radar systems for missile systems	***7A26B***
Airborne radar	***7A26B***
Aircraft gaskets	***1A01A***
Aircraft/helicopters	***Cat. 9A***
Airframe structures equipment	***1B03A***
Airlocks, for use with nuclear plants	***2A50B***
Alloys/metal/powder or materials	***1C02A***
Alloys/metal/powders, systems for producing	***1B02A***
Altimeters, airborne	***7A06A***
Aluminum alloys	***1C02A***
Ammunition	***0A18A***
Amorphous alloy strips	***1C03A***
Amplifier equipment	***5A02A***
Amplifiers, solid state	***3A01A***
Analog instrumentation magnetic tape recorders	***3A02A***
Analog transmission equipment	***5A02A***
Analog-to-digital ***and digital-to-analog*** converters	***3A01A***
Analyzers, network	***3A02A***
Analyzers, protocol	***5B02A***
Antennas, phased array	***5A06A***
Anti-friction bearings	***Cat. 2A***
Arc furnaces	***1B50B***
Armor plate machines	***2B18A***
Array processors, digital	***3A01A***
Atomic Frequency-standards	***3A02A***
Attitude Heading Reference System (AHRS)	7D02A
Automatic pilots	***Cat. 7A***
Avionics	***Cat. 7***
Bacteria/fungi/protozoa	***1C61B***
Ball bearings or solid roller bearings	Cat. 2A
Batch mixers	***1B28B***
Batteries	***3A01A***
Bayonets	***0A18A***
Bearings systems, active magnetic	***2A05A***
Bearings, ball or solid roller	***Cat. 2A***

COMMODITY DESCRIPTION	ECCN
Bearings, gas-lubricated foil	2A04A
Bearings, journal sliding	***2A06A***
Bearings, solid tapered	***2A03A***
Beryllium metal/compounds/alloys	***1C19A***
Bismuth	***1C51B***
Bit-error rate testers, telecommunications	***5B02A***
Bladders made from fluorelasomers	***1A01A***
Bladders, fuel, for aircraft	***1A01A***
Blowers, corrosion resistant to hydrogen sulfide	***2A55B***
Boards, mother, for computers	***4A03A***
Boilers, marine	***8A18A***
Bonding, diffusion, equipment	***1B03A***
Boron ***and boron*** compounds	***1C57B***
Brush seals, equipment for the test of	***9B03A***
C.A.D. for semi-conductor/microcircuit	3B01A
C.A.D. software	***3D03A***
Cable manufacturing equipment	***5B01A***
Cable, fluoride fiber/other	***6A04A***
Cable, optical fiber/other communication	***5A05A***
Calcium	***1C52B***
Cameras	***6A03A***
Capacitors	***3A01A***
Carbon fibrous and filamentary materials	***1C10A***
Casks for transporting radioactive materials	***2A50B***
Catalysts	***1C19A***
Cellular phones/radio technology	***5E02A***
Cellular phones/radio, switching	***5A03A***
Cellular/mobile phones/radios containing cryptography	***5A11A***
Centrifugal balancing machines	***2B53B***
Centrifugal casting machines	***2B18A***
Ceramic (other) or graphite materials	***1C27B***
Ceramic base materials	***1C07A***
Chambers, environmental	***1B18A***
Channel estimators	***5B02A***
Chemical weapons, equipment used in production of	***Cat. 1B***
Chemicals on the International Munitions List	***1C18A***
Chlorine trifluoride	***1C56B***
Chlorofluorocarbons	***1C06A***
Cipher equipment	***5A11A***
Co-processors, graphics	***4A03A***
Collector, for nuclear use	***2A52B***
Common channel signalling	***5A03A***
Communications	***Cat. 5***
Communications equipment	***Cat. 5***
Communications intercepting devices & parts	***5A02A***
Communications processors	***Cat. 5***
Communications transmission equipment	***5A02A***
Compasses/gyroscopes	***Cat. 7***
Components made from fluorinated compounds	***1A01A***
Compounds, fluorinated	***1A01A***

COMMODITY DESCRIPTION	ECCN
Composite conductors, "superconductive"	*1C05A*
Composite structures (other)	*1A22B*
Composite structures or laminates	*1A02A*
Composite theoretical performance (CTP)	*Cat. 4*
Compressor/blowers for hydrogen sulfide	*2A55B*
Computer-aided-design (CAD) software for semiconductor devices or integrated circuits	*3D03A*
Computers	*Cat. 4*
Computers, airborne	*4A02A*
Computers, non-ruggedized	*4A03A*
Computers, software	*Cat. 4D*
Computers, technology	*Cat. 4E*
Computers, test/manufacture/development equipment	*Cat. 4B*
Computers. ruggedized	*4A01A*
Construction equipment (to military specs) controlled	*0A18A*
Controlled environment furnaces	*1B50B*
Copolymers, thermoplastic liquid crystal	*1C08A*
Copolymers, vinylidene fluoride	*1C09A*
Crime-science laboratories, mobile, nonmilitary	*9A80B*
Crucibles	*1A44B*
Cryptanalytic equipment	*5A11A*
Cryptographic & ancillary equipment	*5A11A*
Cylindrical *tubing*	*1A46B*
D-A, A-D converters	*3A01A*
Damping or flotation fluids	*1C06A*
Data communication equipment	*Cat. 5*
Deep submergence vehicles	*Cat. 8A*
Densification equipment, pyrolytic	*1B30B*
Depleted uranium	*1A48B*
Detection/tracking equip. infrared/ultraviolet	*6A02A*
Detonators	*3A49B*
Diesel/marine engines	*8A18A*
Digital computer peripherals	*Cat. 4*
Digital transmission equipment	*5A02A*
Dimensional inspection systems	*2B06A*
Direct numerical control systems	*Cat. 2B*
Disk drives, computer	*Cat. 4*
Doppler navigation radar equipment	*7A26B*
Electro-optic materials	*6C04A*
Electrolytic cells for fluorine production	*1B19A*
Electron accelerators	*2A54B*
Electron video tubes/specialized components	*Cat. 6A*
Electronic devices and components	*3A01A*
Electronic equipment	*3A02A*
Electronic test equipment	*3A02A*
Electronic vacuum tubes	*3A01A*
Electrostatic collectors	*2A52B*
Emulators for microcircuits	*3A02A*
Encoders, position	*3A01A*

COMMODITY DESCRIPTION	ECCN
Encryption/decryption equipment	*5A11A*
Engines, marine gas turbine	*9A02A*
Equipment for production of fibers/prepegs/preforms	*1B01A*
Ethyl and Methyl centralites	*1C18A*
Exchanges, telephones	*5A03A*
Explosives (military)/propellants/fuels	1C18A
Facsimile equipment	*5A02A*
Fiber optic	*6A06A*
Fiber optic cable	*5A05A*
Fiber-optic connectors, couplers, & components	*5A05A*
Fiber-optic hull penetrators or connectors	*8A02A*
Fiber-optic manufacturing equipment	*5B01A*
Fibers, reinforcement, equipment	*1B01A*
Fibrous/filamentary material, laminated	2C10A
Fibrous/filamentary materials of carbon	*1A02A*
Filament winding machines	*1B01A*
Firing sets	*3A46B*
Fittings, nuclear use	*1A51B*
Flotation fluids	*1C06A*
Fluids and lubricating materials	*1C06A*
Fluorinated compounds	*1A01A*
Fluorocarbon compounds (unprocessed)	*1C09A*
Foil bearings, gas-lubricated	*3A04A*
Forms and forgings, cylindrical	*1A46B*
Frequency agile radio systems	*5A02A*
Frequency agile radio systems	*5A11A*
Frequency standards	*3A02A*
Frequency synthesizers	*3A02A*
Fuel bladders	*1A01A*
Furnaces, vacuum or controlled environment	*1B50B*
Gas, turbine blade/vane-making equipment	*9B01A*
Gas-lubricated foil bearings	*2A04A*
Gaskets for aircraft	*1A01A*
Gateways and bridges, telecommunications	*5A02A*
Gear making/finishing machines	*2B03A*
Generators, nuclear related	*2A50B*
Generators, signal	*3A02A*
Graphite materials, missile systems	*1C27B*
Gravimeters	*6B07A*
Gravity meters (gravimeters) & gradimeters	*6A07A*
Gun honing machines	*2B18A*
Gun systems, high-velocity	*3A48B*
Gyro tuning test stations	*7B03A*
Gyrostabilizers	*Cat. 7*
Hafnium metal/compounds/alloys	*1C19A*
Hair type absorbers	*1C01A*
Heat exchangers, nuclear related	*2A50B*
Heat shields	*1C22B*
Helicopters	*Cat. 9A*
Helium, enriched in isotope 3	*2C55B*

COMMODITY DESCRIPTION	ECCN
HEMT (High electron mobility transistors)	*3C01A*
High energy devices	*3A01A*
High velocity gun systems	*3A48B*
Hot isostatic presses	*2B04A*
Hydraulic fluids	*1C06A*
Hydrides	*3C04A*
Hydrofoils	*8A02A*
Image enhancing	*4A03A*
Imaging equipment, direct view	*6A02A*
Induction coil magnetometers	*6A06A*
Induction hardening machines (for tank turret comp.)	*2B18A*
Inertial measurement unit (IMU)	*7B22B*
Inertial navigation systems	*7A03A*
Information Security	*Cat. 5*
Infrared communications systems	*5A02A*
Inorganic fibrous or filamentary materials	*2C10B*
Inspection equipment, non-destructive	*2B01A*
Inspection equipment, nuclear	*2A50B*
Integrated circuit manufacturing equip.	*3B01A*
Integrated circuits	*3A01A*
Integrated Services Digital Network	*5A03A*
Interlacing machines	*1B01A*
Intrinsic magnetic gradiometers	*6A06A*
Inverters/converters/frequency changers	*3A50B*
Isostatic presses	*2B24B*
Isostatic presses, hot	*2B04A*
Isotopically enriched helium	*1C55B*
Journal sliding bearings	*2A06A*
Kasers	*6A05A*
Ketones	*1C08A*
Lasers, telecommunications systems	*5A02A*
Light systems for underwater use	*8A02A*
Light systems for underwater use	*8A93A*
Line terminating equipment	*5A02A*
Lithium metal/compounds/alloys	*1C19A*
Lithography equipment, semiconductor	*3B01A*
Local area network	*Cat. 5*
LSI masks/substrates/mask making and related equip.	*3C01A*
Lubricants	*Cat. 1*
Lubricating materials	*1C06A*
Machinery for aircraft manufacture	*1B03A*
Machinery for military equip. mfg./testing	*2B18A*
Machines for manufacture of jet/gas turbine engines	*Cat. 9B*
Machines for turning optical-quality surfaces	*2B02A*
Magnesium	*1C53B*
Magnesium alloys	*1C02A*
Magnetic collectors	*2A52B*
Magnetic metals	*1C03A*
Magnetic/pressure/acoustical underwater detection dev.	*6A18A*
Magnetometers	*6A06A*

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COMMODITY DESCRIPTION	ECCN
Mandrels and bellows forming dies/rotor fab. equip.	*2B51B*
Manipulators, remote, for nuclear use	***2A50B***
Manned submersible vehicles	*8A01A*
Manufacturing/inspection machine that can be numerically	*Cat. 2B*
Maraging steel	***1A27B***
Maraging steel	***1A47B***
Marine technology	***Cat. 8***
Masks or reticles	***3B01A***
Mass spectrometers	***3A51B***
Materials (see also specific categories)	***Cat. 1***
Materials Processing	***Cat. 2***
Materials processing table: Deposition techniques	***Cat. 2B***
Measuring equipment, electronic	*3A02A*
Measuring equipment, telecommunications	***5B01A***
Medical equipment, computerized	***Cat. 4***
Mesh, phospher bronze	***1A45B***
Metal alloys/powders and materials	***1C02A***
Metal alloys/powders and materiel, equipment for	***1B02A***
Metal-organic compounds; Al, Gallium, Indium	***3C03A***
Metals	***Cat. 1***
Microwave antennas, phase array	***5A06A***
Microwave equipment	*3A01A*
Microwave equipment (receivers/transceivers)	***3A02A***
Microwave equipment telecommunications	***8A02A***
Microwave or millimeter wave devices	***3A01A***
Military explosives, equipment	***1B18A***
Military helmets	*0A18A*
Military nuclear reactor-related power gen. equip	*2A19A*
Military training equipment	*9A18A*
Mixers, batch, for mixing solid propellants	*1B28B*
Modems	***5A02A***
Molds for bonding and forming	***1B03A***
Molybdenum & molybdenum alloys	***1C22B***
Mother boards, computers	***4A03A***
Motors, submarine-propulsion electric	*8A18A*
Mtop (millions of theoretical operations per second)	***Cat. 4A***
Multidirectional/multidimensional weaving machines	***1B01A***
Multiplex equipment	***5A02A***
Multispectral imaging sensors	***6A02A***
Muzzle-loading (black powder) firearms	***0A18A***
Naval equipment/diesel engines	*8A18A*
Navigation/director finding equipment	*Cat. 7*
Network analyzers	***3A02A***
Network control	***5A04A***
Neutron generator systems	*2A19A*
Neutron generator systems	***2A19A***
Nickel alloys	***1C02A***
Nickel powder/porous metal	*1C19A*
Niobium alloys	***1C02A***
Non-fluorinated polymeric substances	***1C08A***

COMMODITY DESCRIPTION	ECCN
Nozzles substrates and throats	***1C22B***
Nozzles, spec. designed for producing materials from precursor ***gases***	***1B30B***
Nuclear reactor/nuclear power plant-related comm.	***5A01A***
Nuclear reactor/nuclear power plant-related equip.	***2A50B***
Numerical control equipment	***Cat. 2B***
Ocean cable	***5A05A***
Optical amplifiers, telecommunications	***5A02A***
Optical detectors	***6A02A***
Optical fiber characterization equipment	***5B01A***
Optical fibers & cables	***5A05A***
Optical fibers/cables mfg. & test equipment	***5B01A***
Optical integrated circuits	***3A01A***
Optical sensors	***6A02A***
Optical/optical tube elements	***6A02A***
Optics	***Cat. 6***
Organic fibrous and filamentary materials	***1C10A***
PABX/PBX equipment	***5A03A***
Packet switching equipment	***5A03A***
Packings of phosphor bronze mesh	***1A45B***
Panoramic/digitally controlled radio receivers	***5A02A***
Parachutes, military	***9A18A***
Peripherals, computers	***Cat. 4***
Phased array antennas	***5A06A***
Photo-voltaic cells	***3A01A***
Photographic equipment	***6A03A***
Photosensitive components	***6A02A***
Photosensitive equipment	***6A22B***
Piezoelectric polymers & copolymers	***1A01A***
Pipe/valves/heat exchangers, stainless steel/corrosion resistant	***2A52B***
Planar absorbers	***1C01A***
Plasma furnaces	***1B50B***
Polymeric substances/manufactures	***Cat. 1***
Power generating equipment	***2A19A***
Power plant simulator, nuclear	***2A50B***
Precision tracking systems	***6A29B***
Precursor materials	***1C07A***
Preforms for fabrication optical trans. fibers	***5C01A***
Presses & specialized controls/accessories	***2B04A***
Pressure refueling equipment	***9A18A***
Pressurized aircraft breathing equipment	***9A18A***
Private automatic exchanges	***5A03A***
Profilometers	***7B02A***
Propellant control systems, liquid or slurry	***9A23B***
Propellants, constituent chemicals for	***1C31B***
Propellants, production of	***1B18A***
Propellants, production of	***1B28B***
Propellers, marine	***8A02A***
Propulsion systems	***Cat. 9***
Propulsive substances	***1C31B***

COMMODITY DESCRIPTION	ECCN
Protocol analyzers	*5B02A*
Pulse generators	*3A44B*
Pump jet propulsion systems	*8A02A*
Pumps for nuclear uses	*2A53B*
Pyrolytic deposition & densification equipment	*1B30B*
Radar & related equipment	*Cat. 7*
Radar (airborne) & related equipment	*6A08A*
Radar (airborne) & related equipment	*6A28B*
Radar cross section measurement equipment	*6A30B*
Radar reflectivity	*1C21B*
Radiation hardened cameras	*2A50B*
Radiation shielding windows, high-density	*2A50B*
Radio relay communications equipment	*5A02A*
Radiographic equipment (linear accelerators)	*3A22B*
Radioisotopes	*1C54B*
Reactor, nuclear	*2A50B*
Reactor, nuclear, simulator	*2A50B*
Receiving equipment containing cryptography	*5A11A*
Recording equipment	*3A02A*
Reduced observables	*1C21B*
Reflectometers	*7B22B*
Reflectometers, optical time domain	*5B01A*
Regenerator equipment	*5A02A*
Remote manipulators, nuclear use	*2A50B*
Repeater and regeneration equipment	*5A02A*
Resin or pitch-impregnated fibers	*1C10A*
Resists	*3C02A*
Rigid magnetic media testing & grading equipment	*4B02A*
Ring laser gyros	*7B02A*
Robots controllers, and end-effectors	*2B01A*
Robots, for underwater use	*8A02A*
Rotary input type shaft absolute position encoders	*3A01A*
Satellite communications equipment	*Cat. 5*
Satellite earth station equipment	*5A02A*
Satellite receivers, telecommunications	*5A02A*
Scatterometers	*7B02A*
Scrambler equipment	*5A11A*
Seals & sealants for aircraft or aerospace	*1A01A*
Searchlights (designed for military use)	*0A18A*
Security, multilevel equipment	*5A11A*
Semi-conduct or manufacturing equipment	*3B01A*
Semi-conduct or/microcircuits device test equipment	*3B01A*
Sensors	*Cat. 6*
Signal analyzers	*3A02A*
Signal processing, telecommunications	*5A02A*
Signal processors, computers	*4A03A*
Signal processors, digital	*3A01A*
Signalling systems	*5A03A*
Skirts, seals & fingers designed for underwater	*8A02A*
Smart cards, using cryptography	*5A11A*

COMMODITY DESCRIPTION	ECCN
Snubbers	*2A50B*
Software - located in each category under "D"	
Solid propellants equipment	*1B18A*
Solid propellants equipment	*1B28B*
Solid tapered roller bearings	*2A03A*
Source code for inertial navigation equipment	*7D02A*
Source code for integrated avionics systems	*7D03A*
Spreads spectrum radio systems	*5A02A*
Spreads spectrum radio systems	*5A11A*
Stealth technology	*1C21B*
Steel, maraging	*1A27B*
Steel, maraging	*1A47B*
Stored program controlled switching equip.	*5A03A*
Stream turbines, nuclear related	*2A50B*
Submarine cable	*5A05A*
Submersible systems	*8A02A*
Substrates	*3B01A*
Supercomputers	*Cat. 4*
Superconductive composite conductors	*1C05A*
Superconductive solenoids or electromagnets	*3A01A*
Switching devices	*3A43B*
Switching equipment, telecommunications	*5A03A*
Syntactic foam for underwater use	*8C01A*
Synthetic hydrocarbon oils	*1C06A*
Tape-laying machines	*1B01A*
Tapered roller bearings, solid	*2A03A*
Telecommunications	*Cat. 5*
Telecontrol equipment	*5A02A*
Telemetering/telecontrol equipment	*5A20B*
Telephone switching systems	*Cat. 5*
Telluride compounds	*6C02A*
Terrain contour mapping equipment	*7A26B*
Test equipment, telecommunications	*5B01A*
Thrust vector control surfaces	*1C22B*
Thyratrons	*3A43B*
Tip shroud castings	*9B01A*
Tools, dies for airframe or aircraft	*1B03A*
Tow-placement machines	*1B01A*
Transcoders	*5A02A*
Transducers	*9B08A*
Transistors	*3A01A*
Transmission equipment	*5A02A*
Transmitter amplifiers	*5A02A*
Transportation equipment	*Cat. 9*
Tubes, cold cathode	*3A43B*
Tubes, electron vacuum	*3A01A*
Tubes, image intensifier	*6A02A*
Tubes, photomultiplier	*6A44B*
Tubes, television camera	*6A42B*
Tubing, cylindrical	*1A46B*

COMMODITY DESCRIPTION	ECCN
Turbine blades, equip. for mfg. or measuring	*9B01A*
Turbines, steam & turbine-generator, nuclear related	*2A50B*
TV cameras, radiation-hardened, nuclear use	*2A50B*
Underwater breathing apparatus	*8A18A*
Underwater communications cable	*5A05A*
Underwater communications systems	*5A02A*
Underwater detection/locating equipment	*6A01A*
Underwater vision systems	*8A02A*
Unprocessed fluorinated compounds	*1C09A*
Uranium hexafluoride mass spectrometers	*3A51B*
Uranium hexafluoride production plants	*1B19A*
Uranium, depleted	*1A48B*
Vacuum microelectronics	*3E02A*
Vacuum or controlled environment furnaces	*1B50B*
Valves	*1B19A*
Valves	*2A19A*
Valves	*2A51B*
Vanes	*9B01A*
Vehicles designed for military use	*9A18A*
Vehicles designed for transport of "missile" systems	*9A22B*
Vessels, including hydrofoils	*8A01A*
Vibration test equipment	*2B04B*
Vibration test equipment	*9B26B*
Vibration test equipment (acoustic)	*9B06A*
Virus, software for protection against	*5D13A*
Viruses/viroids	*1C61B*
Wafer handling systems	*3B01A*
Water tunnel equipment	*8B01A*
Waveguides, flexible	*3A01A*
Weaving machines	*1B01A*
Wind tunnels	*Cat.9*
Wire/cable, non-telecommunications	*1A01A*
X-ray systems, flash discharge	*3A01A*
Zirconium metal/alloys	*1C19A*

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106X