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More "Emerging Technologies" Now Require an Export Review

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What You Need To Know:

- The rule adds five categories to the CCL: discrete microwave transistors, continuity of operation software, post-quantum cryptography, underwater transducers, and air-launch platforms.
- These categories were added as part of Department of Commerce efforts to regulate technologies that could impact national security.
- ECCNs that were added or amended are 3A001, 3D005, 5A002, 6A001, and 9A004.

The Department of Commerce continues to identify and establish export controls on emerging technologies for national security purposes as innovative technologies flood the U.S. market. The purpose of the new rulemaking is to identify certain technologies that until recently were not on the Commerce Control List (CCL) and thus not controlled for export and deemed export purposes. These technologies were classified as EAR99, which do not require a Commerce Department Bureau of Industry and Security (BIS) export license.

The new rule became effective on May 23 and implements changes made to the Wassenaar Arrangement List of Dual-Use Goods and Technologies, maintained and agreed to by the 42 governments that participate in the Wassenaar Arrangement.

The rule adds five technologies to the CCL that are essential to the national security of the United States. The broad categories added are discrete microwave transistors, continuity-of-operation software, post-quantum cryptography, underwater transducers designed to operate as hydrophones, and air-launch platforms. As a result of this change, these items are now controlled for export, reexport, or other transfer/disclosure.

Discrete Microwave Transistors

ECCN 3A001 is amended to control discrete microwave transistors used in microwave semiconductors that are available for both civilian and military use. Concerns arise because these new microwave transistors cover wider frequency bands at higher levels, "opening up new possibilities for radar and other transmitting applications," according to the *Federal Register* notice. The new microwave semiconductors operate at a higher voltage and frequency than conventional semiconductors. These properties make the wideband semiconductors useful in the military for decoys, jammers, and radars, and for civilians in LEDs, lasers, and DVD players. BIS predicts wideband semiconductors will be used in high-energy vehicles and solar/wind energy power converters.

Continuity-of-Operation Software

ECCN 3D005 will now include control software that ensures continuity of operation when electronic devices are exposed to electromagnetic pulse (EMP) or electrostatic discharge (EDS). Using this software requires a license everywhere except Canada under national security and antiterrorism license requirements. The software is designed to

restore the normal operation of a microcomputer or microcircuit within 1 millisecond of a disruption caused by EMP or EDS without loss of continuity of operation.

Post-Quantum Cryptography

ECCN 5A002 is amended to control algorithms with security based on post-quantum cryptography. This control reflects the development and application of modern cryptography while recognizing the increased use of cryptography in the public domain. Post-quantum cryptography is thought to secure data against an attack by a quantum computer. The control ensures that there is consistent treatment between modern classical and post-quantum cryptography due to the increase in the number of post-quantum algorithms.

Underwater Transducers

ECCN 6A001 is amended to note that underwater acoustic transducers designed to operate as passive receivers are hydrophones. These hydrophones are subject to control because they can be used in anti-submarine warfare. The amendment means that underwater acoustic transducers and receivers will be treated together rather than separately.

Air-Launch Platforms

ECCN 9A004 is amended to revise the heading to include air-launch platforms. This allows control of aircraft specifically designed to be air-launch platforms for space-launch vehicles in recognition of the move toward air-launch platforms by space tourism companies. Previously, military aircraft were used for air-launched rockets for military purposes. With the ongoing transition to more commercial space use, this control predicts even more air-launch platform use for commercial owners.

The Bottom Line

Companies should review ECCNs 3A001, 3D005, 5A002, 6A001, and 9A004 to identify whether their products will now require licenses to export the items or to share related technology, and they should update their export compliance plans and procedures accordingly.

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