



Untangling ECCN Complexity

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> Agenda

**Why ECCN
Classification
Breaks Down**

**BIS Commerce
Control List
(CCL) Order of
Review**

**Using the BIS
Website &
Interactive Tools
Correctly**

**Applying the BIS
Order of Review
— Live ECCN
Walk-Throughs**

**Common Pitfalls,
Jurisdiction
Traps & BIS
Expectations**

**Documentation,
Defensibility &
Key Takeaways**

**Closing,
Resources, and
Q & A**

> Session Objectives

- Apply the BIS Commerce Control List Order of Review correctly, including mandatory 600-series and “specially designed” analysis
- Use the BIS website and interactive tools effectively without bypassing regulatory sequencing or judgment
- Develop defensible ECCN determinations that withstand audits, disclosures, and BIS scrutiny



> Why ECCN Classification Still Fails

Process Failures

- ✓ Skipping the BIS Order of Review
- ✓ Starting with tools instead of structure
- ✓ Treating EAR99 as a default

Technical Missteps

- ✓ Ignoring performance thresholds
- ✓ Misapplying “specially designed”
- ✓ Relying on incomplete specs

Documentation Gaps

- ✓ Conclusions without analysis
- ✓ Vendor ECCNs taken at face value
- ✓ Records that don't stand alone



How Export Control Reform Still Shapes ECCN Classification

Structural Changes

- ✓ Introduction of the 600 Series
- ✓ Formal CCL Order of Review
- ✓ Shift from broad to enumerated controls

Analytical Changes

- ✓ Defined term “specially designed”
- ✓ Mandatory catch-and-release analysis
- ✓ Increased focus on negative analysis

Compliance Expectations

- ✓ Greater exporter accountability
- ✓ Less tolerance for assumptions
- ✓ Documentation now central to defensibility

> Where the CCL Order of Review Fits

State → Other Agencies → Commerce

Classification Always Follows This Sequence:

- 1. USML Order of Review (State Department)**
 - Is the item enumerated or otherwise described on the USML?
- 2. Exclusive Agency Jurisdiction Check**
 - Is the item subject to another agency's exclusive control (e.g., NRC, DOE)?
- 3. CCL Order of Review (BIS / Commerce)**
 - Apply the formal CCL Order of Review
 - Begin with category → product group → 9x515 and 600 series



> **What BIS Means by “Order of Review”**

This is not a best practice — it is a required sequencing built into the EAR.

The BIS “Order of Review” is:

- A **formal sequencing requirement** in the EAR
- Established to support correct classification after Export Control Reform
- Designed to prevent **misclassification and premature conclusions**
- Applied **before** licensing, country chart, or exceptions
- Independent of tools — **tools must follow the order**
- The first ECCNs to review are 9x515 and 600 series ECCNs

> Step 1: Identify the CCL Category

This step narrows the universe — it does not decide the ECCN.

CCL Categories (0–9) Organize Controls By:

- Broad **technology or functional area**
- Type of capability being controlled
- National security focus of the control

Important Principles:

- More than **one category may apply**
- This step **limits where you search** — not the final outcome
- Skipping or guessing here leads to misclassification later



> Step 2: Identify the Product Group

This determines how BIS describes and controls the item.

CCL Product Groups:

A — Equipment

B — Test, Inspection & Production Equipment

C — Materials

D — Software

E — Technology

Why This Step Matters:

- Product groups control **where ECCNs live** within a category
- One product may trigger **multiple product groups**
- This step must be completed **before reviewing individual ECCNs**



> **Step 3: Review the 600 Series FIRST**

This step is mandatory – not optional.

BIS Requires Exporters To:

- Review **9x515 and 600 series ECCNs** before all other ECCNs
- Apply this review **within the identified category and product group**
- **Stop immediately** if the item is described in a paragraph **without** “specially designed”
- Proceed to **“specially designed” analysis** only when required

> SPECIALLY DESIGNED — EXPLAINED (EAR §772.1)

A defined control term that requires a complete, two-step analysis.

Step 1 — CATCH

- Was the item **developed** for a controlled application (e.g., military, intelligence, space, missile)?

➔ If **NO** → *Not specially designed*

➔ If **YES** → proceed to Step 2

Step 2 — RELEASE

- Does the item meet **any release provision**?

- General commercial use
- Standard or common item
- Not uniquely modified for the controlled application

➔ If **YES** → Released (*NOT specially designed*)

➔ If **NO** → *Specially designed*

> Step 4: Apply the “Specially Designed” Definition

This step determines whether the item stays in the ECCN – or falls out.

When This Step Applies:

- Only if the ECCN paragraph **uses the term “specially designed”**
- Common in **600 series** and select non-600 ECCNs

How BIS Expects the Analysis to Be Applied:

- Apply the **full two-step definition** (Catch → Release)
- Evaluate **all applicable release provisions**
- Base conclusions on **technical facts**, not intent or marketing
- Document **why the item does or does not qualify for a release**

Outcome of This Step:

- **Qualifies as “specially designed”** → remains in the ECCN
- **Released** → continue reviewing other ECCNs in the category




> **Step 5: Review Remaining ECCNs in the Category**

Only after the 600 series and “specially designed” analysis are complete.

BIS Requires Exporters To:

- Review **all remaining ECCNs** within the identified category
- Begin with the **x000 series** and proceed sequentially
- Look for ECCN paragraphs that **describe the item without using “specially designed”**
- Apply the **“specially designed” definition again** if the term appears
- **Stop the review** when an ECCN fully describes the item



> **Step 6: EAR99 Is the LAST Step**

EAR99 is a conclusion — never a shortcut.

An Item May Be Designated EAR99 Only If:

- The **entire applicable CCL category** has been reviewed
- No ECCN — including the **600 series** — describes the item
- All required “**specially designed**” **analyses** have been completed
- The item is **not elsewhere specified** on the CCL

What EAR99 Does NOT Mean:

- No export controls apply
- No compliance review is required
- No documentation is needed

> **BIS Liability Reminder**

Decision tools assist — they do not transfer responsibility.



Remember:

- Use of **BIS decision tools does not eliminate exporter liability**
- Classifications are only as accurate as the **facts provided**
- Incorrect or incomplete inputs produce incorrect outcomes
- The **exporter remains responsible** for the final ECCN determination

What BIS Expects to See:

- Correct application of the **CCL Order of Review**
- Proper use of tools at the correct step
- **Documented reasoning**, not just conclusions



> **BIS Website: What's Changed**

Modernized tools reflect higher expectations — not reduced responsibility.

What Has Changed:

- ✓ Transition from static PDFs to interactive, searchable tools
- ✓ Centralized access to the CCL, definitions, and guidance
- ✓ Tools designed to support exporter self-classification
- ✓ Increased visibility into how BIS expects exporters to work

> BIS Resources & Where They Fit in the Order of Review

Tools support the process — they do not replace it.

Where Each Tool Fits:

Interactive Commerce Control List (ICCL)

- Narrowing tool to identify candidate ECCNs
- New tool – replaced the Alphabetical Index

Definitions (Part 772)

- Legally binding terms that determine scope and outcomes
- Applied whenever ECCN scope depends on defined terms

Interpretations (Part 770)

- Used to clarify application in close or ambiguous cases

> Interactive Commerce Control List (ICCL)

Using the ICCL Correctly (Search → Filter → Validate)

- Start **broad**, then narrow
- Search potential ECCNs based on function and keywords
- Think in terms of performance, not branding
- Filtering might limit results
- Identify relevant categories and product groups
- Manage and compare multiple candidate ECCNs



> ICCL: Reading an ECCN Correctly

The answer is not always in the ECCN header.

When Reviewing an ECCN, You Must:

- Read the **entire ECCN**, not just the title
- Review **all paragraphs** (.a through .x)
- Identify **performance thresholds** embedded in the text
- Apply **Notes and Technical Notes**
- Confirm whether “**specially designed**” is used

Common Mistakes:

- Relying on the ECCN header alone
- Stopping after the first applicable paragraph
- Ignoring exclusions and carve-outs

> **Definitions & Interpretations** **(Parts 772 & 770)**

If you don't apply the definitions, you don't know the scope.

Why Definitions Matter:

- ECCNs rely on **defined regulatory terms**
- Definitions determine **what is in — and out — of scope**

High-Impact Defined Terms Include:

- “Development,” “Production,” and “Use”
- “Technology” vs. “Software”
- “Specially designed”
- “Required”

Role of Interpretations (Part 770):

- Clarify how BIS applies specific provisions
- Address common gray areas and edge cases
- Support **reasonable exporter judgment**

“



Let's look around the [ICCL](#) together



> BIS Tools: Key Takeaway

Tools support classification – they do not replace analysis or judgment.

What BIS Tools Do:

- Help locate and narrow relevant areas of the CCL
- Improve efficiency and consistency in classification work
- Assist with license determination
- Support — but do not perform — regulatory analysis

What BIS Tools Do NOT Do:

- Determine the correct ECCN
- Apply performance thresholds or exclusions
- Replace the **CCL Order of Review**
- Shift responsibility away from the exporter

Bottom Line:

- **Process + judgment + documentation** make a classification defensible



> **How the Walk-Throughs Will Work**

Same BIS Order of Review. Same tools. Different products.

For Each Example, We Will:

- Start with jurisdiction and CCL orientation
- Apply the BIS CCL Order of Review step by step
- Identify and rule out candidate ECCNs
- Apply “specially designed” only when required
- Arrive at a defensible ECCN conclusion
- Show what gets documented — and why

What These Walk-Throughs Are (and Are Not):

- ✓ Realistic, practitioner-level analysis
- ✓ Focused on reasoning, not speed
- X Not shortcuts or “pattern matching”



Walk-Through #1: Industrial Centrifugal Process Pump

A product commonly assumed to be EAR99.

Product Description (High-Level):

- Industrial centrifugal process pump
- Used in commercial and industrial facilities
- Designed for continuous fluid transfer
- Constructed from standard industrial materials
- Includes mechanical components and basic controls
- Not marketed or designed for military use

Why This Example Matters:

- Frequently classified as EAR99 without full review
- Performance characteristics can trigger CCL consideration
- Demonstrates how assumptions bypass the **BIS Order of Review**

> **Technical Parameters** **(Industrial Centrifugal Process Pump)**

Performance – not product type – drives classification.

Relevant Technical Characteristics:

- ✓ **Maximum operating pressure:** > 10 MPa
- ✓ **Operating temperature range:** –20°C to +350°C
- ✓ **Materials of construction:** Nickel-based corrosion-resistant alloy
- ✓ **Flow rate:** Sustained high-volume transfer
- ✓ **Drive:** 15 HP Electric motor
- ✓ **Seal system:** Designed for hazardous or aggressive fluids, but not used on a chemical facility
- ✓ **Control interface:** Integrated electronic monitoring and control



> Jurisdiction & CCL Orientation

Before looking at ECCNs, we orient ourselves correctly

Jurisdiction Check:

- Item is **not enumerated on the USML**
- No indication of **exclusive agency jurisdiction** (e.g.: DOE)
- Item is **subject to the EAR**

CCL Orientation:

- **Primary CCL Category:** Category 2 — Materials Processing
- **Applicable Product Group:** A or B — Equipment
- Analysis must begin with the ECCN **9x515** and **600 Series** within this category

> Review of 9x515 and 600 Series ECCNs

Required under the BIS CCL Order of Review.

Review Outcome:

- First-tier ECCN review completed in accordance with BIS guidance
- Reviewed **9x515** and **600-series** ECCNs
- Confirmed no applicable 600-series ECCNs in Category 2
- Item is industrial centrifugal process equipment
- No first-tier ECCN describes this item

Result:

- Proceed to **sequential ECCN review** within Category 2A and 2B

> **Sequential ECCN Review** **(Category 2A & 2B)**

Once first-tier ECCNs are ruled out, the review continues in order..

- Proceed with sequential review of non-9x515 / non-600 ECCNs
- Review **Category 2A & 2B (Equipment)** ECCNs in order
- Focus on **performance-based controls**
- Compare technical parameters directly against **ECCN scope and thresholds**

Key Observation:

- Let's see if pump's technical characteristics **align with any ECCN description**

“



Let's apply the ICCL to this scenario





> ECCN Determination

ECCN that affirmatively describes the item

Final ECCN Determination

- Item is **controlled under the EAR**
- **EAR99 is not available**
- Item is classified under **ECCN 2B999.j**
 - Pumps designed for industrial service and for use with an electrical motor of 5 HP or greater.

> Walk-Through #2: Industrial IoT Gateway Firmware

Classification where intent does not matter — functionality does.

Product Description (High-Level):

- ✓ Industrial IoT gateway firmware embedded in commercial process-control hardware
- ✓ Performs data protection and secure communications between field devices and enterprise networks
- ✓ Uses encryption for confidentiality and authentication
- ✓ Distributed globally as part of a commercial industrial automation product, but not sold off-the-shelf as standalone software
- ✓ Not marketed as military, defense, or classified technology
- ✓ Not specifically designed, modified, or configured for a USML defense article

> Jurisdiction & ECCN Orientation (Encryption)

Encryption classification begins with Part 2 of the CCL — not with the product.

Jurisdiction Check:

- Software is **subject to the EAR**
- Not subject to **ITAR or exclusive agency control**

CCL Orientation:

- **Category 5 — Information Security**
- **Part 2 — Information Security**



> Encryption Functionality Assessment

Functionality determines the path — not labels, marketing, or intent.

Encryption Is Present If the Software:

- Performs **cryptographic functions** for:
 - Data confidentiality
 - Secure authentication
- Uses **standard cryptographic algorithms**
- Implements **key generation, storage, or management**
- Relies on encryption as an **integral operational function**
- Is not limited to **incidental or user-configurable encryption**

Result:

- **Category 5, Part 2 review is mandatory**

> ECCN Decision Point: 5D002 vs. 5D992

Mass-market eligibility determines the outcome

Criterion	5D002	5D992
Encryption function	Performs information security functions	Performs encryption
Role of encryption	Integral to operation	Ancillary / limited
Key management	Implemented by the software	Limited or fixed
Mass-market eligibility	✗ Does not meet all criteria	✓ Meets all criteria
BIS Notes	Does not qualify under Note 3	Qualifies under Note 3
Control status	Controlled	Less-controlled
EAR99 available	✗ No	✗ No

If mass-market criteria are not fully met → 5D002 applies

“



Let's apply the ICCL to this scenario.



> ECCN Determination: 5D002 (Embedded Encryption Software)

Controlled classification with a conditional authorization path.

ECCN Determination:

- Software is classified under **ECCN 5D002**
- Performs information security functions
- Encryption is integral to operation
- Does not qualify for mass-market treatment under Note 3

Regulatory Outcome:

- Item is controlled under the EAR
- EAR99 is not available
- Exports may be eligible for **License Exception ENC (§740.17)**
(subject to paragraph-specific conditions and reporting)
- **Initial and/or annual reporting** may be required
- **CCATS** may be required.

> Common Encryption Misclassification Traps

Encryption misclassification usually happens by shortcut — not by complexity.

- Assuming commercial or mass-market status without completing Note 3 analysis
- Treating embedded encryption as hardware-only and ignoring software classification
- Starting with ENC eligibility instead of ECCN determination
- Relying on vendor or supplier classifications without independent review
- Failing to reassess classification after software updates or new features
- Assuming EAR99 applies because encryption is “basic” or widely used



Where Companies Break the Order



- **Outcome-driven classification**
(deciding EAR99, ENC, or “no license” before analysis)
- **Improper sequencing**
(skipping required steps in the Order of Review)
- **Category shopping**
(jumping to a familiar ECCN instead of the correct category)
- **Misuse of tools**
(ICCL, vendor classifications, prior CCATS used as shortcuts)
- **Failure to reassess**
(software updates, configuration changes, new functionality)



> **CCATS: When It Is the Right Tool**

Appropriate Uses of CCATS:

- When **ECCN scope is unclear** after a complete internal analysis
- When classification hinges on **nuanced technical interpretation**
- When the company is **not fully comfortable self-classifying** a complex item

What CCATS Provides:

- A **formal BIS classification determination**
- Publicly releasable, written confirmation
- Greater certainty for **licensing, re-exports, and downstream users**

> Incorrect ECCN: Is It a Violation?

Not every ECCN error creates a violation — but some absolutely do.

Practical Outcomes When an ECCN Is Wrong:

•No violation

- ECCN error did **not change** licensing or authorization outcome
- Correct EEI filings to reflect the correct ECCN

•Technical violation

- Incorrect ECCN used, but exports would still have been authorized
- Correct EEI filings to reflect the correct ECCN

•Substantive violation

- License required, license exception misused, or conditions not met

Key Risk Factors BIS Evaluates:

- Number of affected exports
- Whether the error is **isolated or systemic**
- Impact on **licensing, ENC eligibility, or reporting**

> Voluntary Self-Disclosure (VSD): When and Why

When a VSD Is Generally Expected:

- Exports occurred **without required authorization**
- **ENC conditions or reporting obligations** were not met
- The issue impacts **multiple exports or products**
- The company identified a **systemic breakdown**

What BIS Evaluates in a VSD:

- Speed of disclosure after discovery
- Quality of **root-cause analysis**
- Corrective actions and controls implemented
- Whether similar issues are likely to recur

> Recordkeeping

Legal Requirement:

- 15 CFR Part 762 Requires companies and individuals involved in exporting or reexporting items must maintain proper records related to
 - Export Control Classification Number (ECCN) determinations.
 - Export and reexport activities under the EAR

Retention Period:

- Records must be retained for at least five years from the latest of:
 - The date of the export, reexport, or transfer
 - The expiration of any license
 - The date of any denial, modification, or revocation of a license

Records to Keep:

- ✓ ECCN Classification Determinations and support analysis
- ✓ Export Documentation (licenses, license exceptions, shipping records)
- ✓ Internal Communications & Due Diligence supporting classification and authorization decisions



> What a Defensible ECCN File Includes

A Defensible ECCN File Contains:

- Clear identification of the **item being classified**
(hardware, software, technology — explicitly stated)
- Evidence the **Order of Review was followed**
(not just the final ECCN)
- Documentation of:
 - Technical Specs
 - ECCNs considered and ruled out
- Technical or functional analysis tied directly to:
 - ECCN scope language
 - Notes, definitions, and exclusions
- Date, author, and any escalations
- In case of reassessment, what triggered it *(updates, design changes, regulatory changes)*

> Key Takeaways

The **Order of Review** is non-negotiable

Encryption items are **exclusively controlled** under **Category 5, Part 2**

Encryption and software require **ongoing reassessment**

EAR99 must be **earned**, not assumed

Documentation is your first line of defense

Documentation is your first line of defense

Recordkeeping is a legal requirement (15 CFR Part 762)

BIS interactive tools enhance accuracy — scope still controls

Best outcomes combine BIS tools with expert analysis

BIS interactive tools enhance accuracy — they do not replace scope analysis.

When uncertainty remains, CCATS is the right escalation

Authorization impact requires immediate legal review and VSD evaluation

> Resources: BIS and EAR Sites

- ✓ <https://www.bis.gov/regulations/ear/table-of-contents>
- ✓ <https://www.bis.gov/regulations/ear/772>
- ✓ <https://www.ecfr.gov/current/title-15/section-774.1>
- ✓ <https://www.bis.gov/regulations/ear/interactive-commerce-control-list?isExpanded=&category=&keyword=>
- ✓ <https://www.bis.gov/media/documents/ccl-order-review-decision-tool>
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- ✓ <https://www.bis.gov/regulations/ear/740#supplement-1-740>
- ✓ <https://www.ecfr.gov/current/title-15/subchapter-C/part-762>
- ✓ <https://www.bis.gov/enforcement/oev/vsd>
- ✓ <https://www.bis.doc.gov/index.php/enforcement/oev/penalties>

> Destination Control Statement (§758.6 (a))

“These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations”

> Questions?

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