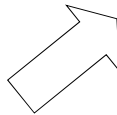




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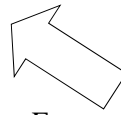
## DOC Export Controls and the Commerce Control List

### Rationale



#### Internal Considerations

National Security Concerns  
Foreign Policy Initiatives  
Economic Concerns



#### External Considerations

Wassenaar Arrangement  
Missile Technology Control Regime  
Nuclear Suppliers Group  
Australia Group

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## Overview

- Dual use export controls do not pose a significant barrier to the civil nuclear power industry.
- NSG dual-use items are routinely approved worldwide for commercial end use

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## Agency Jurisdiction

| Process                           | Agency                              | Jurisdiction  | Advisory Agencies                                    |
|-----------------------------------|-------------------------------------|---|--|
| Part 810                          | Department of Energy                | Nuclear technology and services related to the production of Special Nuclear Material | Departments of Commerce, Defense, State, and the NRC |
| Part 110                          | Nuclear Regulatory Commission (NRC) | Nuclear equipment and material  | Departments of Commerce, Defense, State, and Energy  |
| Export Administration Regulations | Department of Commerce              | Dual-use items listed on the Commerce Control List                                    | Departments of Defense, Energy, and State            |

U.S. Department of Commerce | International Trade Administration



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## Commerce Jurisdiction (nuclear power related items)

- Balance of plant – turbines, generators, switching gear, pipes and valves
- Health and safety equipment – radiation detection and monitoring, fire safety, facility security
- General infrastructure, telecommunications, tools and maintenance equipment
- Materials and Manufacturing Equipment

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## Commerce Jurisdiction (NSG dual-use items)



Pressure Transducers (2B230) – Used for pressure measurement in a multitude of industrial processes as well as in the uranium hexafluoride gas in the centrifuge process for isotope separation

Mass Spectrometers (3A233) – Determine composition of chemical samples as well as the chemical make-up of uranium, plutonium, etc



Machine Tools (2B001) – Product manufacturing in virtually every industry including nuclear explosive device components and uranium enrichment equipment

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## Jurisdictional Disputes

- Jurisdiction is usually well defined.
- Key words include: especially designed, balance of plant, primary coolant loop, source or special nuclear material.
- Disputes are usually handled informally, many times with only a phone call or e-mail.

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## Classification Request and Advisory Opinions

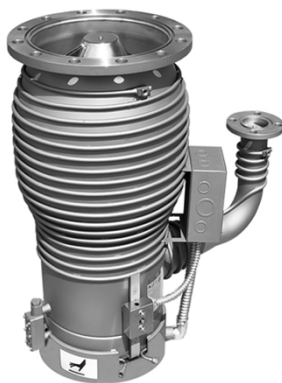
- If you need help in figuring out what ECCN applies to your product or if you have transaction specific questions.
- BIS is there to help. Section 748.3 of the EAR explains the Commodity Classification and Advisory Opinion process.
- Information can also be found at [www.bis.doc.gov](http://www.bis.doc.gov)

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## List Based Controls

- ECCN  
**2B231**



- Heading  
Vacuum pumps having all of the following characteristics.

- a. Input throat size equal to or greater than 380 mm
- b. Pumping speed equal to or greater than 15 m<sup>3</sup>/s
- c. Capable of producing an ultimate vacuum better than 13.3 mPa

- Reason for Control  
**NP1, AT 1**

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## What Are Catch-All Controls?

- Designed to help eliminate the worldwide threat of proliferation of WMD and their missile delivery systems
- License requirements beyond the multilateral regime control lists
- Between 50 and 80% of the goods and technology required for a project or facility of concern involving WMD or missile delivery systems are not controlled

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## U.S. Implementation of “Catch-All” Controls

- “Know” Provision
- “Is Informed” Provision
- “U.S. Persons” Provision
- Crossover Provision



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## Nuclear End-Use Controls

### Section 744.2 (Catch-All/EPCI)

- License required if the item will be used directly or indirectly in any of the following:
  - Nuclear explosive activities
  - Unsafeguarded nuclear activities
  - The following activities, whether safeguarded or unsafeguarded:
    - Facilities for the chemical processing of irradiated special nuclear or source material
    - Facilities for the production of heavy water
    - Facilities for the separation of isotopes of source and special nuclear material
    - Facilities for the fabrication of nuclear reactor fuel containing plutonium

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## End-Use/End-User Based Controls

Recently, we received an export inquiry for stainless steel pipe for use in a nuclear power plant in PRC.

Do I need to apply for a license under Part 744.2 of the EAR?

*End- Use/End-User Based Controls*

**My company recently had an export license for a machine tool denied because of a military end use in China. This item isn't even controlled for National Security (NS) reasons.**

**What's going on?**

**End-Use/End-User Based  
Controls**

**I am a distributor of college textbooks.  
I often get requests for foreign customers for  
textbooks on nuclear engineering.**

**Should I be worried about Part 744 controls?**





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## Entity List

- The Entity List notifies exporters of requirements for exports/re-exports to specified end users
- See Supplement Number 4 to part 744 of the EAR

| COUNTRY | ENTITY  | LICENSE REQUIREMENT               | LICENSE REVIEW POLICY | FEDERAL REGISTER CITATION   |
|---------|---|-----------------------------------|-----------------------|---|
| RUSSIA  | All-Russian Scientific Research Institute of Technical Physics (VNIITF), a.k.a., the following eight aliases:<br><br>-Vserossiyskiy Nauchno-Issledovatel'skiy Institut Tekhnicheskoy Fiziki;<br>-Russian Federal Nuclear Center-VNIITF (RFNC-VNIITF);<br>-Kasli Nuclear Weapons Development Center;<br>-Institute of Technical Physics;<br>-Zababkhin Institute;<br>-ARITP (All Russian Institute for Technical Physics);<br>-Federal State Unitary Enterprise Russian Federal Nuclear Center - Academician E.I. Zababkhin All-Russian Scientific Research Institute of Technical Physics (FGUPRFYaTs-VNIITF) | For all items subject to the EAR. | Case-by-case basis.   | 62 FR 35334, 6/30/97<br>66 FR 24267, 5/14/01<br>75 FR 78883, 12/17/10<br>76 FR 29998, 05/24/11. |

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## Listed Indian Nuclear Entities

- Department of Atomic Energy (DAE) subordinates
  - Nuclear reactors not under IAEA safeguards;
  - Nuclear research centers (Bhabha Atomic Research Center (BARC) and Indira Ghandi Atomic Research Center (IGCAR));
  - Indian Rare Earth (IRE);
  - Other facilities (fuel reprocessing and enrichment, and heavy water/ammonia plants) involved in India's nuclear program.

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## Deemed Export Rule

- The obligation to get a license before releasing controlled technology or source code to a foreign person is informally referred as the “deemed export” rule
- Releases of controlled technology or source code to foreign persons in the U.S. are “deemed” to be an export to the person’s country or countries of nationality.



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## Nationality

- Commerce Dept. looks to a foreign person’s most recent country of citizenship or permanent resident
- State Dept. looks at history of nationality, including the country of birth, of the person in determining technology covered in the ITAR



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## Deemed Exports and I-129 – How much of an issue?

- What if I am a nuclear power plant operator?
- What if I am a valve manufacturer?
- Are Chinese or Indian nationals possible?

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## Evaluation Factors

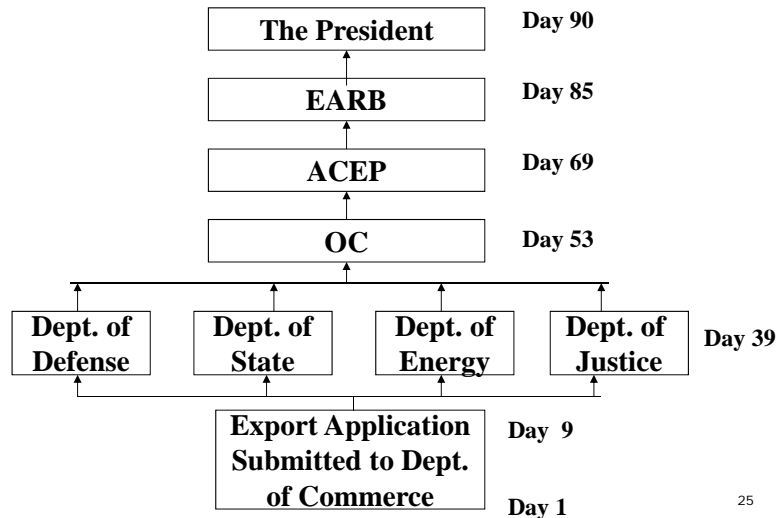
- Country
- Commodity
- End-Use
- Significance for Nuclear Development
- Non-Proliferation Credentials
- Assurances and Guarantees
- Risk of diversion
- Sanctions

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## Licensing Deadlines



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## Decision to Applicant

- Applicants are notified of licensing decision by mail or electronically
- If license is going to be denied, the exporter has 20 days to rebut the decision
- Exporter has the ability to appeal the licensing decision as outlined in Part 756 of the EAR

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## QUESTIONS ?

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## **NRC Export/Import Licensing Requirements and Procedures**

Brooke G. Smith  
Senior International Policy Analyst  
Export Controls and International Organizations  
Office of International Programs

July 17, 2012

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## Objectives

- Describe export licensing roles and responsibilities
- Review NRC export/import licensing requirements – 10 CFR Part 110
- Summarize criteria and decision making processes

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## NRC's Mission

License and regulation the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.



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## NRC's International Activities

- Participates In Major International Nuclear Organizations & Activities
- Export/Import Licensing
- Implement USG Non-Proliferation Policy



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## Legal Basis

- Atomic Energy Act of 1954
- Nuclear Non-Proliferation Act of 1978
- Treaties, Conventions and Agreements including:
  - Nuclear Non-Proliferation Treaty
  - International Atomic Energy Agency (IAEA) Safeguards
  - Conventions: Nuclear Safety; Waste and Spent Fuel; Physical Protection; Early Notification; Assistance; and Liability
  - 123 Agreements for peaceful nuclear cooperation

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## 10 CFR Part 110 Regulations

- Reflect statutory requirements and implement international treaties and agreements
- Apply to any person who exports or imports nuclear equipment and material with few exceptions
- Authorize export/import only – do not authorize receipt, acquisition, transfer, transport, possession
- Require compliance with applicable domestic requirements
- Provide for public review and comment

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## NRC Export/Import Licensing Authority

- Exports: reactors; fuel cycle facilities; components; nuclear grade graphite for nuclear end use; heavy water; source, special nuclear and byproduct materials including spent fuel and radioactive waste
- Imports: reactors; fuel cycle facilities; source, special nuclear and byproduct materials including spent fuel and radioactive waste

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## 10 CFR Part 110 not applicable to:

- DOD and DOE (or its contractors) for selected activities
- Exports/imports of Munitions List items
- Exports/imports of “dual use” equipment
- Imports of deuterium, nuclear grade graphite and minor reactor components
- Transshipments

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## If subject to 10 CFR Part 110:

- NRC-controlled commodities must be authorized by either:
  - A **general** export or import license or
  - A **specific** export or import license
- Exemptions can be granted on a case-by-case basis

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## Types of Licenses - General Licenses

- Not exemptions – Must comply with domestic regulations
- Issued as regulations in 10 CFR 110 after rulemaking proceeding and coordination with the Executive Branch
- Authorize exports (10 CFR 110.21-110.26 ) of:
  - Small quantities of uranium, plutonium, tritium
  - Minor reactor components to specified countries
- Authorize imports (10 CFR 110.27) of:
  - Major reactor components
  - Source, special nuclear or byproduct materials if recipient authorized to receive and possess
- Annual reporting required for certain exports

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## Types of Licenses – General Licenses

- General Licenses cannot be used for exports to embargoed destinations:

Cuba  
Iran  
Iraq

North Korea  
Syria  
Sudan

- A specific export license is required

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## General licenses for exports/imports:

- Authorize only limited exports to restricted destinations

|                 |                 |
|-----------------|-----------------|
| Afghanistan     | India           |
| Andorra         | Israel          |
| Angola          | Libya           |
| Burma (Myanmar) | <del>Oman</del> |
| Djibouti        | Pakistan        |

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## NRC Form 7

- § 110.32 – Information required in an application for a specific license/NRC Form 7:
  - Name and address of applicant
  - Dates of proposed first and last shipments
  - Description of equipment or material
  - Any foreign obligations on the equipment or material

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## Specific License - Review Process

- All applications (NRC Form 7) made public in ADAMS
- Some require Federal Register notices
- Interested parties have up to about 30 days to respond
- Processing fee is commensurate with level of review required (proliferation significance of commodity)
  - Most require interacting with foreign governments
  - Some require review by interested Executive Branch agencies, coordinated by Department of State
  - Some require review and approval by Commissioners

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## Specific Licenses - Review Process

- It can take anywhere from 40 days to 4 months or more to coordinate internal and interagency reviews
- Applications may be withdrawn or returned without action
- Licenses may be issued or denied
- Licenses issued:
  - Are signed by OIP Deputy Director
  - Name parties, identify end users and end uses
  - Set expiration dates
  - Can be amended and renewed prior to expiration date

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## Specific License Applications

- Are assigned a docket number (1100XXXX) and one of the following prefixes:
  - XSNM = export of special nuclear material
  - XSOU = export of source material
  - XMAT = export of material (i.e., deuterium)
  - XB = export of byproduct material (Appendix L)
  - PXB = export of Appendix P byproduct material (Appendix P)
  - XR = export of reactor (or major components)
  - XCOM = export of minor components
  - XW = export of radioactive waste
  - IW = import of radioactive waste

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## Criteria for “Major” Exports (XSNM, XSOU, XR)

- Agreement for Cooperation (123 Agreement)
- Full-scope IAEA safeguards in recipient non-nuclear weapon states (NNWS)
- USG must obtain assurances from the foreign government on case-by-case basis that material or equipment will be made subject to 123 Agreement with respect to:
  - No nuclear explosive use or R&D on any nuclear explosive device
  - Adequate physical security will be maintained
  - No retransfer or alteration in form (reprocessing) without prior USG consent
- Not inimical to common defense and security, and
- For XR, not an unreasonable risk to the public health and safety of the U.S.

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## Criteria for “Minor” Exports (XCOM, XMAT)

- USG must obtain assurances from the foreign government on case-by-case basis that:
  - IAEA (full-scope) safeguards will apply in NNWS
  - No nuclear explosive use or R&D on such device
  - No retransfer without prior USG consent
- Not inimical to common defense and security

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## Appendix P Licensing

- Added to 10 CFR Part 110 in 2005
- Implements IAEA Code of Conduct which includes Guidance on Import and Export
- 2010 rulemaking allows GL imports

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## Radioactive Materials - Appendix P

- 67 applications from Mar 2010 to Mar 2012:
  - 26 for Category 1
    - Co-60 in medical devices (e.g. blood irradiators, large industrial source)
  - 41 for Category 2
    - Ir-192, Am-241, Cs-137 for industrial use (e.g. radiography and oil well logging)



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## For Additional Information

- <http://www.nrc.gov>
- <http://www.nrc.gov/about-nrc/ip/export-import.html>
- <http://www.nrc.gov/about-nrc/ip/faq.html>
- <http://www.nrc.gov/reading-rm/doc-collections/cfr/part110/>
- <http://www.nrc.gov/reading-rm/doc-collections/forms/nrc7.pdf>
- [http://www.ita.doc.gov/td/energy/Civil%20Nuclear%20Exporters%20Guide%20\(FINAL\).pdf](http://www.ita.doc.gov/td/energy/Civil%20Nuclear%20Exporters%20Guide%20(FINAL).pdf)

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**Thank you!**  
**Questions?**

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