



Office of  
**Nonproliferation  
and International  
Security (NIS)**

# Webinar

## Proposed Changes to the 10 CFR Part 810 Regulation

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Wednesday, November 2  
10:00 a.m. – 11:30 a.m.



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**Nonproliferation  
and International  
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# Welcome

**Andrew Walker**, *Moderator*

Battelle Memorial Institute

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Office of Nonproliferation and International Security,  
National Nuclear Security Administration,  
U.S. Department of Energy



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# Webinar Purpose

The purpose of this webinar is to provide background information and highlight proposed changes to the 10 CFR Part 810 Regulation.

The NNSA will answer as many questions as possible.

The webinar is not the forum for formal comments.



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# Agenda

- I. Welcome, introductions, agenda, and ground rules
- II. Presentation
- III. Break (10 minutes): Time for NNSA to prepare answers to your questions
- IV. Respond to questions
- V. Closing



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# Ground Rules for Participation

- Moderator will:
  - Keep webinar on schedule
  - Facilitate Q&A session
- Please mute your phones.
  - Audio will not be used for taking questions
  - Will help keep audio quality for all participants
- Use LiveMeeting Q&A function to ask questions.
- Questions maybe submitted at any time and, in fact, are encouraged.
- Like any meeting, respect the views of others.



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# Conference Call Audio

The audio portion of the Webinar will be provided via conference call.

- Dial **+1 (877) 336-1839**
- When prompted, dial **3075724#**



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# Conference Call Audio

- A **speaker phone** is recommended for hands free listening.
- Please **mute your phone** at all times.
- Please **do not place the conference call on hold** at any time because everyone on the call will hear the hold music.



# Questions

Please submit your questions electronically using Live Meeting:

- Use the **Q&A Menu**.
- To ask a question, type your question into the **Q&A textbox** and click **ask**.
- All questions will be addressed at the end of the presentation during the Q&A time period.





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# Formal Comments

Formal comments on the proposed rulemaking will not be accepted during the Webinar.

Please comment formally on the proposed rulemaking as provided in the Federal Register on September 7, 2011 (Vol.76, No.173) and October 24, 2011 (Vol. 76, No. 205).

Comment period extended 30 days (December 7, 2011).

Participation in the Webinar is not a prerequisite for submission of written comments.



# Office of Nonproliferation and International Security (NIS)



**Safeguard and Secure** nuclear material to prevent its diversion, theft and sabotage.



**Control** the spread of WMD-related material, equipment, technology and expertise.



Negotiate, monitor and **verify** compliance with international arms control and nonproliferation treaties and agreements.



Develop and implement DOE/NNSA arms control and nonproliferation **policy** to reduce the risk of weapons of mass destruction.

## Proposed Revision of 10 CFR 810

- To safeguard the integrity of DOE's rulemaking process, the primary goal of DOE employees in ex parte communications is to listen and ask clarifying questions. The DOE will not engage in negotiation or reveal substantive aspects of the forthcoming rulemakings. The DOE is the receiver of information.

Federal Register 74/Vol. 197



- Nuclear commerce has changed since the last revision in 1986, and the regulations need to be updated to reflect the way U.S. nuclear companies conduct business today.
- The proposal is designed to facilitate U.S. conformity to Nuclear Suppliers Group Guidelines.



- Clearly states the types of technology transfers that are in or out of the scope of the regulation (810.2)
- Adds technical clarity for terms used in the regulations (810.3)
- Clarifies what activities are generally authorized and to which destinations when no Sensitive Nuclear Technology is involved (810.6)
- Details the information required for requests for specific authorization for a “deemed export” (810.11)



- Staff averages ten calls and two letters a week from U.S. industry concerning scope determinations.
- The new scope section will provide more clarity to industry to enable prospective applicants to better understand the jurisdictional scope of Part 810.



## Current Regulation

- (a) Applies to all persons subject to the jurisdiction of the United States who engage directly or indirectly in the production of special nuclear material outside the United States.
- (b) Applies to activities conducted either in the United States or abroad by such persons or by licensees, contractors, or subsidiaries under their direction, supervision, responsibility or control.

## Revision

- (a) This part applies to:
  - (1) all persons subject to the jurisdiction of the United States (hereinafter “U.S. persons”) who or that engage directly or indirectly in the production of special nuclear material outside the United States, ***by transferring to foreign persons technology that is related to the production of special nuclear material; and***
  - (2) ***assistance and the transfer of technology by U.S. persons, conducted either in the United States or abroad*** by U.S. persons or licensees, contractors or subsidiaries under their direction, supervision, responsibility or control.

***The revision of (a) explicitly articulates that transfers to foreign persons of Part 810 controlled technology anywhere is deemed an export and covered under this Part.***

## Current text:

(c) Applies, but is not limited to, activities involving nuclear reactors and other nuclear fuel cycle facilities for the following:

1. Fluoride or nitrate conversion;
2. Isotope separation (enrichment);
3. The chemical, physical or metallurgical processing, fabricating or alloying of special nuclear material;
4. Production of heavy water, zirconium (hafnium-free or low-hafnium), nuclear-grade graphite or reactor-grade beryllium;
5. Production of reactor-grade uranium dioxide from yellowcake; and
6. Certain uranium milling activities.

***Current (c) is short and does not explicitly state all those portions of the fuel cycle covered under this Part.***



(b) The activities referred to in paragraph (a) involve the following:

- (1) Chemical conversion and purification of uranium and thorium from milling plant concentrates and in all subsequent steps in the nuclear fuel cycle;
- (2) Chemical conversion and purification of plutonium and neptunium;
- (3) Nuclear fuel fabrication, including preparation of fuel elements, fuel assemblies and cladding thereof;
- (4) Uranium isotope separation (uranium enrichment), plutonium isotope separation, and isotope separation of any other elements (including stable isotope separation) when the technology or process can be applied directly or indirectly to uranium or plutonium;
- (5) Nuclear reactors;
- (6) Accelerator-Driven subcritical assembly systems, specially designed or intended for plutonium or uranium-233 production;
- (7) Hydrogen isotope separation and heavy water production;

- (8) Reprocessing of irradiated nuclear materials or targets containing special nuclear material;
- (9) Changes in form or content of irradiated nuclear materials containing special nuclear material, and hot cell facilities;
- (10) Storage of irradiated nuclear materials;
- (11) Processing of high level radioactive waste;
- (12) Movement of irradiated nuclear materials, including specially designed containers therefore;
- (13) The transfer of technology for the development, production or use of equipment or material specially designed or prepared for any of the above listed activities. (See NRC regulations under 10 CFR part 110, Appendix A through Appendix K for an illustrative list of items considered to be specially designed or prepared for certain listed nuclear activities); and
- (14) Other activities related to the production of special nuclear materials outside the United States as the Secretary may determine, notice of which shall be published in the Federal Register.

***The revised list contained in (b) provides detail on all stages of the fuel cycle and nuclear technologies that are controlled under Part 810. Export of these technologies or assistance is either generally authorized or requires specific authorization depending on the destination.***

(c) This part does not apply to:

- (1) Exports licensed by the NRC;
- (2) Public information or basic scientific research;
- (3) Uranium and thorium mining and milling; and
- (4) Nuclear fusion reactors per se, except for supporting systems involving hydrogen isotope separation.

*The revised list contained in (c) provides detail on all stages of the fuel cycle and nuclear technologies that are not controlled under Part 810.*

- These terms have been added or revised:
  - To update technological developments since 1986.
  - To conform with the Nuclear Suppliers Group Guidelines.
  - To provide greater clarity to industry about the scope of Part 810.

# Revised Definitions for Certain Technical Terms

- Basic scientific research
- Cooperative enrichment enterprise
- Enrichment
- Fissile material
- Production accelerator
- Production accelerator – driven subcritical assembly system
- Production subcritical assembly
- Reprocessing
- Specific authorization
- Specifically authorized nuclear activities
- Technology (including development and production)
- Technical assistance
- Technical data
- Use

# Generally versus Specifically Authorized Activities

- The current regulation lists the destinations with respect to which certain activities require Secretarial authorization (810.8[a]), certain activities that always require a specific authorization (810.8[b][c]), and certain other activities that are generally authorized to destinations not listed (810.7).
- The revision specifies destinations to which nuclear assistance and technology transfers have been generally authorized, as long as SNT is NOT included (new 810.6).

***All other activities require a specific authorization  
(new 810.7)***

*Specifically authorized nuclear activities* means the provision of assistance, including the transfer of technology, to foreign persons related to:

- (1) Uranium isotope separation (uranium enrichment), plutonium isotope separation, or isotope separation of any other elements (including stable isotope separation) when the technology or process can be applied directly or indirectly to uranium or plutonium;
- (2) Fabrication of nuclear fuel containing plutonium, including preparation of fuel elements, fuel assemblies, and cladding thereof;
- (3) Hydrogen isotope separation and heavy water production;
- (4) Production accelerator-driven subcritical assembly systems;
- (5) Production reactors; and
- (6) Reprocessing of irradiated nuclear fuel or targets containing special nuclear material.

*These activities require a specific authorization from the Secretary for export to any destination. Other listed technologies or activities contained in the scope statement (810.2) are generally authorized to destinations contained in 810.6(b)(1).*



# Current List of Specific Authorized Destinations (77)

- |                                 |                        |  |                          |
|---------------------------------|------------------------|--|--------------------------|
| 1. Afghanistan                  | 21. Comoros            | 41. Laos                               | 61. Seychelles           |
| 2. Albania                      | 22. Congo (Zaire)      | 42. Liberia                            | 62. Sierra Leone         |
| 3. Algeria                      | 23. Cuba               | 43. Libya                              | 63. Somalia              |
| 4. Andorra                      | 24. Djibouti           | 44. Macedonia                          | 64. Sudan                |
| 5. Angola                       | 25. Equatorial Guinea  | 45. Mali                               | 65. Syria                |
| 6. Armenia                      | 26. Eritrea            | 46. Marshall Islands,<br>Republic of   | 66. Tajikistan           |
| 7. Azerbaijan                   | 27. Gabon              | 47. Mauritania                         | 67. Tanzania             |
| 8. Bahrain                      | 28. Georgia            | 48. Micronesia,<br>Federated States of | 68. Togo                 |
| 9. Belarus                      | 29. Guinea             | 49. Moldova                            | 69. Turkmenistan         |
| 10. Benin                       | 30. Guinea Bissau      | 50. Mongolia                           | 70. Uganda               |
| 11. Botswana                    | 31. Haiti              | 51. Mozambique                         | 71. Ukraine              |
| 12. Burkina Faso                | 32. India              | 52. Niger                              | 72. United Arab Emirates |
| 13. Burma (Myanmar)             | 33. Iran               | 53. Oman                               | 73. Uzbekistan           |
| 14. Burundi                     | 34. Iraq               | 54. Pakistan                           | 74. Vanuatu              |
| 15. Cambodia                    | 35. Israel             | 55. Palau                              | 75. Vietnam              |
| 16. Cameroon                    | 36. Kazakhstan         | 56. Qatar                              | 76. Yemen                |
| 17. Cape Verde                  | 37. Kenya              | 57. Russia                             | 77. Yugoslavia           |
| 18. Central African Republic    | 38. Korea, Republic of | 58. Rwanda                             |                          |
| 19. Chad                        | 39. Kuwait             | 59. Sao Tome and Principe              |                          |
| 20. China, People's Republic of | 40. Kyrgyzstan         | 60. Saudi Arabia                       |                          |





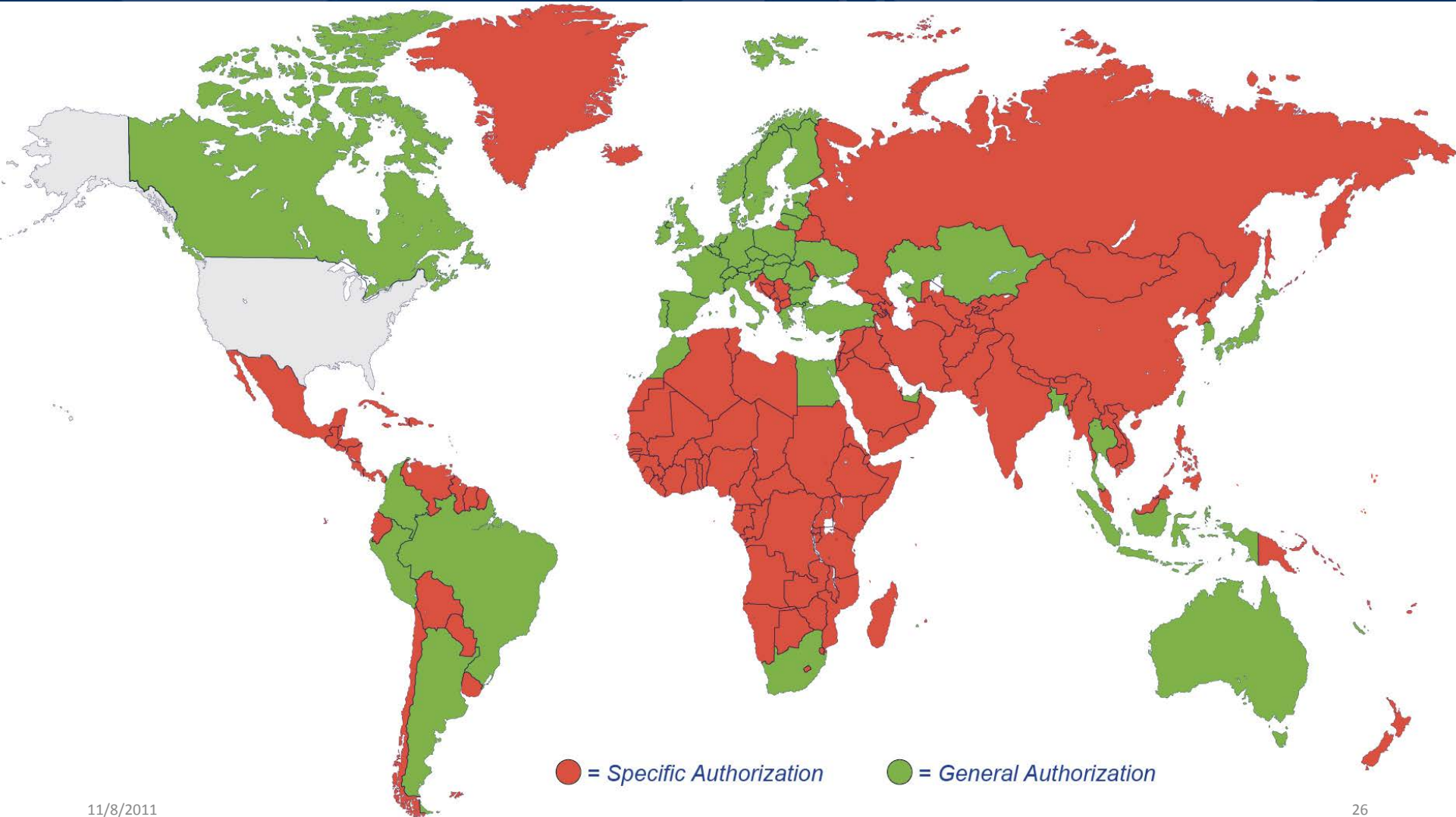


# Proposed Revised List of Generally Authorized Destinations

- |     |                |     |             |     |                      |
|-----|----------------|-----|-------------|-----|----------------------|
| 1.  | Argentina      | 17. | Germany     | 33. | Poland               |
| 2.  | Australia      | 18. | Greece      | 34. | Portugal             |
| 3.  | Austria        | 19. | Hungary     | 35. | Korea, Republic of   |
| 4.  | Bangladesh     | 20. | Indonesia   | 36. | Romania              |
| 5.  | Belgium        | 21. | Ireland     | 37. | Slovakia             |
| 6.  | Brazil         | 22. | Italy       | 38. | Slovenia             |
| 7.  | Bulgaria       | 23. | Japan       | 39. | South Africa         |
| 8.  | Canada         | 24. | Kazakhstan  | 40. | Spain                |
| 9.  | Colombia       | 25. | Latvia      | 41. | Sweden               |
| 10. | Cyprus         | 26. | Lithuania   | 42. | Switzerland          |
| 11. | Czech Republic | 27. | Luxembourg  | 43. | Taiwan               |
| 12. | Denmark        | 28. | Malta       | 44. | Thailand             |
| 13. | Egypt          | 29. | Morocco     | 45. | Turkey               |
| 14. | Estonia        | 30. | Netherlands | 46. | Ukraine              |
| 15. | Finland        | 31. | Norway      | 47. | United Arab Emirates |
| 16. | France         | 32. | Peru        | 48. | United Kingdom       |



# Proposed Revision of Part 810 Regulation



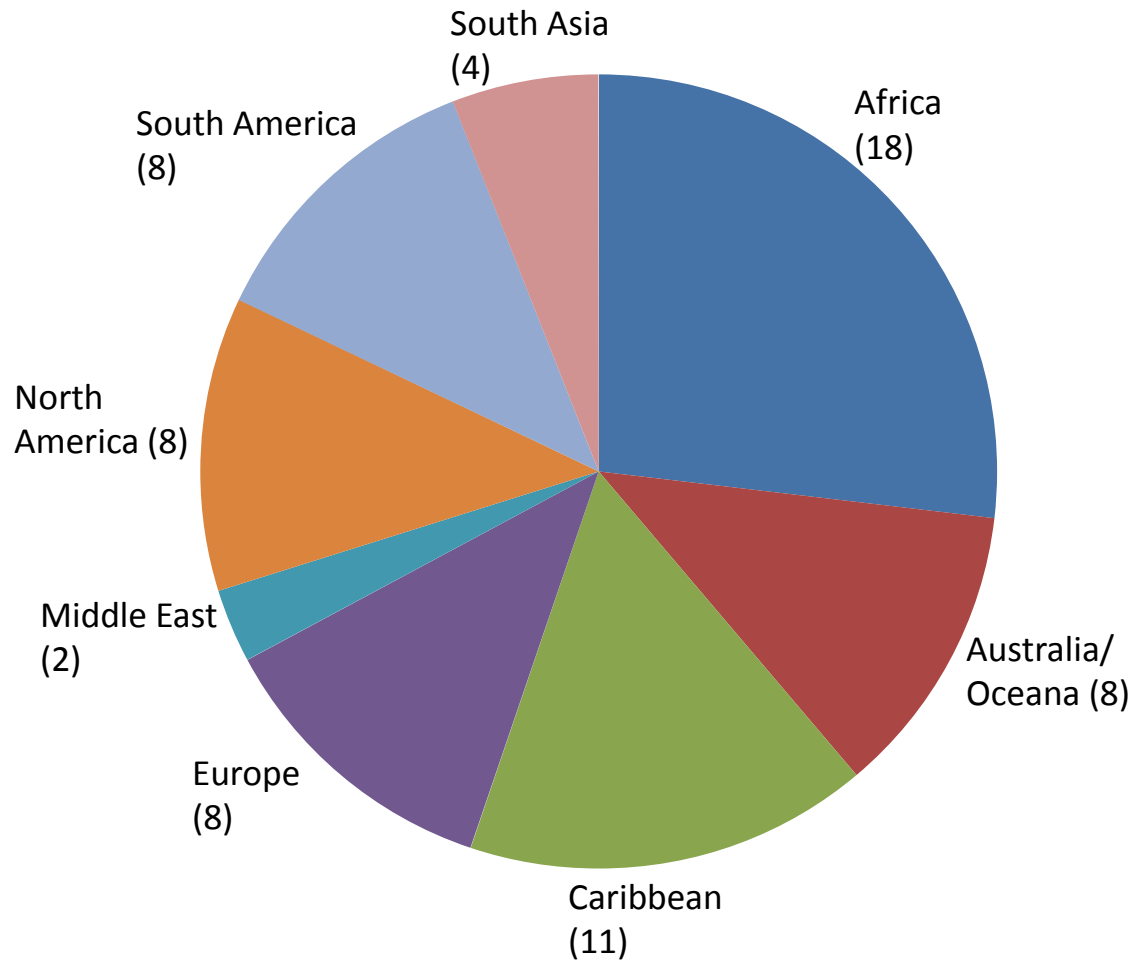


# Proposed Revised List of Destinations that Changed from Generally Authorized to Requiring Specific Authorization (73)

- |     |                        |     |                  |     |                                   |
|-----|------------------------|-----|------------------|-----|-----------------------------------|
| 1.  | Antigua and Barbuda    | 26. | Iceland          | 51. | Saint Kitts and Nevis             |
| 2.  | Bahamas, The           | 27. | Jamaica          | 52. | Saint Lucia                       |
| 3.  | Barbados               | 28. | Jordan           | 53. | Saint Vincent and the Grenadines  |
| 4.  | Belize                 | 29. | Kiribati         | 54. | Samoa                             |
| 5.  | Bhutan                 | 30. | Lebanon          | 55. | San Marino                        |
| 6.  | Bolivia                | 31. | Lesotho          | 56. | Senegal                           |
| 7.  | Bosnia and Herzegovina | 32. | Liechtenstein    | 57. | Serbia                            |
| 8.  | Brunei Darussalam      | 33. | Madagascar       | 58. | Singapore                         |
| 9.  | Chile                  | 34. | Malawi           | 59. | Solomon Islands                   |
| 10. | Congo, Republic of the | 35. | Malaysia         | 60. | South Sudan                       |
| 11. | Costa Rica             | 36. | Maldives         | 61. | Sri Lanka                         |
| 12. | Cote d'Ivoire          | 37. | Mauritius        | 62. | Suriname                          |
| 13. | Croatia                | 38. | Mexico           | 63. | Swaziland                         |
| 14. | Dominica               | 39. | Monaco           | 64. | Timor-Leste                       |
| 15. | Dominican Republic     | 40. | Montenegro       | 65. | Tonga                             |
| 16. | Ecuador                | 41. | Namibia          | 66. | Trinidad and Tobago               |
| 17. | El Salvador            | 42. | Nauru            | 67. | Tunisia                           |
| 18. | Ethiopia               | 43. | Nepal            | 68. | Tuvalu                            |
| 19. | Fiji                   | 44. | New Zealand      | 69. | United Republic of Tanzania       |
| 20. | Gambia, The            | 45. | Nicaragua        | 70. | Uruguay, Oriental Republic of     |
| 21. | Ghana                  | 46. | Nigeria          | 71. | Venezuela, Bolivarian Republic of |
| 22. | Grenada                | 47. | Panama           | 72. | Zambia                            |
| 23. | Guatemala              | 48. | Papua New Guinea | 73. | Zimbabwe                          |
| 24. | Guyana                 | 49. | Paraguay         |     |                                   |
| 25. | Honduras               | 50. | Philippines      |     |                                   |



# Where Are the New “Specific Authorization” Destinations?



## Reporting on New “Specific Authorization” Countries

- DOE/NNSA received thirty-five reports in the last three years for activities with entities in countries moving from a generally authorized destination to a specific authorization destination.
  - Nineteen reports were for reactor tech/consulting or engineering services to three destinations (Mexico, Philippines and Jordan).
  - The rest were deemed reports for foreign nationals from sixteen different countries (Ethiopia, Honduras, Nigeria, Grenada, Ghana, Nepal, El Salvador, Mexico, Venezuela, Philippines, Jordan, Barbados, Senegal, Bahamas, Gambia and Malaysia).

- If a proposed transfer includes sensitive nuclear technology as defined in 810.3, the requirements of section 127 and 128 of the Atomic Energy Act apply.
- In addition to the factors in 810.9(b), the Secretary takes into account five additional criteria as detailed in 810/9(c).
- The Secretary's determination also is dependent on receipt of assurances from the foreign government that the technology will not be replicated, used to enrich over 20% HEU, and that security arrangements are appropriate to protect against misuse.

# Deemed Export Applications 810.11(c)

- DOE has proposed explicit instructions about the materials required for a specific authorization for U.S. persons seeking to transfer to a foreign national of a country not listed in § 810.6(b) technology subject to § 810.6(a), or seeking to transfer to any foreign national technology subject to § 810.7. No application is required for green card holders or asylees. The application should include:
  - (1) a description of the technology that will be made available to the foreign national;
  - (2) the purpose of the proposed release, and a description of the applicant's technology control program;
  - (3) a copy of any confidentiality agreement between the applicant and the foreign national;  
and
  - (4) background information about the foreign national.

- No changes to Section 810.14 are proposed. The penalties remain:
  - (1) Permanent or temporary injunctions or restraining orders may be issued to prevent any person from violating any provision of the Atomic Energy Act or its implementing regulations.
  - (2) Any person convicted of violating or conspiring or attempting to violate any provision of section 57 of the Atomic Energy Act may be fined up to \$10,000 or imprisoned up to 10 years, or both. If the offense is committed with intent to injure the United States or to aid any foreign nation, the penalty could be up to life imprisonment and a \$20,000 fine.
  - (b) Title 18 of the United States Code, section 1001, provides that persons convicted of willfully falsifying, concealing or covering up a material fact or making false, fictitious or fraudulent statements or representations may be fined up to \$10,000 or imprisoned up to five years, or both.





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# Break

**We'll be right back.**  
*(10 minute break)*



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# Closing

## Your written comments are encouraged.

- Identify written comments with RIN 1994-AA02.
- Electronic submittal encouraged. Use any of the following methods:
  1. Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
  2. E-mail: [Port810.NOPR@hq.doe.gov](mailto:Port810.NOPR@hq.doe.gov). Include RIN 1994-AA02 in the subject line of the message.
  3. Mail: Richard Goorevich, Senior Policy Advisor, Office of Nonproliferation and International Security, NA-24, National Nuclear Security Administration, Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585.

**Thank you for participating.**