

4. The Office of Nuclear and Missile Technology Controls

The Office of Nuclear and Missile Technology Controls (NMT) administers U.S. multilateral and unilateral export controls on dual-use items related to nuclear and missile technology. The United States is a member of both the Nuclear Suppliers Group (NSG) and the Missile Technology Control Regime (MTCR), international groups whose mission is to prevent the spread of weapons of mass destruction. The Office represents the Department in international negotiations on the export controls that are shared by member nations of the NSG and MTCR. One of NMT's goals is the harmonization of U.S. and the nuclear and missile technology export controls with those of other supplier nations, and the NSG and the MTCR are the primary focal points of those global harmonization efforts. NMT, composed of the Nuclear Technology Division and the Missile Technology Division, also has responsibility for reviewing commodities subject to the Enhanced Proliferation Control Initiative (EPCI) and the Nuclear Referral List (NRL).

The Nuclear Suppliers Group

The Nuclear Suppliers Group was formally established in 1992 and membership now totals 35 member nations, with the addition of Latvia in 1998. Two documents guide NSG members in establishing national controls: the Guidelines and the Annex. The NSG Guidelines establish the underlying precepts of the regime, and provide a degree of order and predictability among suppliers, ensuring harmonized standards and interpretations of NSG controls. All members commit to full-scope International Atomic Energy Agency (IAEA) safeguards on all fissionable materials in current peaceful activities; physical protection against the unauthorized use of transferred materials and facilities; and restraint in the transfer of sensitive facilities, technology, and weapons-usable materials. The Guidelines also call for consultations among members on specific sensitive cases to ensure that transfers do not contribute to risks of conflict and instability.

The Annex is the actual list of 70 categories of items subject to NSG controls. The Annex also contains a General Technology Note, which ensures that exports of technology directly associated with listed items will be subject to the same degree of scrutiny and control as the items themselves. NSG members are required to establish national licensing procedures for the transfer of Annex items.

Consultations among members were informal in the 1980's, and member countries consulted regularly on a bilateral basis. A framework for consultation on dual-use guidelines and an exchange of information on procurement activities of potential recipient countries was established. Since the early 1990's, formal annual plenary meetings have

been held to provide the opportunity for these multilateral consultations. The Plenary also provides the opportunity for members to review the Annex and the Guidelines to ensure that NSG controls are focused on truly sensitive nuclear technology, and that they provide the means to meet evolving nuclear

proliferation challenges. Overall responsibility for NSG activities lies with the member states; the NSG proceeds on the basis of consensus.

Recent NSG Actions

The NSG's 1998 Plenary marked the twentieth anniversary of the publication of the NSG Guidelines. NSG membership has grown to 35 members and inquiries continue to be received from non-member nations regarding the possibility of joining the NSG. The successful 1997 transparency seminar, where delegates from 76 nations learned about the requirements for NSG membership, has spurred interest on the part of non-supplier nations in joining the NSG. The issue of whether membership, or adherence without membership, is more appropriate for countries that are not suppliers, but merely transit states for nuclear transactions, was a topic of discussion at the 1998 Plenary, and will be raised again in 1999.

The NSG's Annex Working Group completed its work by forwarding a draft of a revised and restructured Annex for the approval of the NSG at the 1998 Dual-Use Regime (DUR) Consultations meeting. Also approved at the DUR for consideration by the NSG at the next (1999) Plenary were the Information Sharing Group's report on the NSG information sharing system, member reports of export denials, and the results of the "catch-all" controls survey.

The first working group meeting on Intangible Technology Controls was held in 1998. Members exchanged information on national controls on Internet transactions, foreign university students engaged in nuclear programs, and scientists attending conferences or working in sensitive countries. Noting the need to balance academic and individual freedom with technology control requirements, and the differences among member nations on how this balance is achieved, the group agreed to continue its work in 1999. A second meeting of the Intangible Technology Controls working group is scheduled for the spring of 1999.

Through its Transparency Working Group, the NSG hosted an International Seminar on the Role of Export Controls in Nuclear Proliferation. The meeting provided an opportunity for states and non-governmental organizations, both within and outside the NSG, to pose questions, raise topics, and exchange views on nuclear export controls. A second seminar is scheduled for the spring of 1999.

Unilateral Control Actions

The United States unilaterally controls some items for nuclear reasons. For example, turbines and generators for nuclear powerplants are controlled for nuclear and antiterrorism reasons. Also controlled are the pipes, valves, cranes, and pipe fittings associated with turbines and generators that are used on the non-nuclear island of commercial nuclear and fossil fuel powerplants. Because these pipes, valves, cranes, and pipe-fittings are corrosion-resistant, they are also commonly used in non-nuclear production facilities, such as breweries, where corrosion is a problem.

To minimize the adverse effect of these controls on non nuclear commodities while ensuring that controls on items with potential nuclear weapons utility are sustained, NMT successfully proposed limiting the license requirement to items that contribute exclusively to nuclear power production. Under this decontrol action, which BXA published on January 15, 1998, in the *Federal Register*, 80 to 90 percent of the items used in commercial nuclear powerplants are removed from the licensing requirements of the Commerce Control List and may be freely exported for civilian purposes to most countries, while exports of critical nuclear power production components, such as reactor vessels, fuel rod equipment, and primary pumps, remain under control under the authority of the Nuclear Regulatory Commission.

The Missile Technology Control Regime

On April 16, 1987, the United States, Canada, France, Germany, Italy, Japan, and the United Kingdom created the Missile Technology Control Regime (MTCR) which has the purpose of limiting the proliferation of missiles capable of delivering weapons of mass destruction. The MTCR is not a treaty-based regime, but rather an informal group of countries that have agreed to coordinate their national export controls to help prevent missile proliferation. The MTCR now has 32-member countries.

The MTCR Guidelines and the Equipment and Technology Annex form the basis for U.S. missile technology controls. The Guidelines provide licensing policy, procedures, review factors, and standard assurances on missile technology exports. The Annex is the list of items of missile-related commodities subject to controls, and is divided into two categories. Category I items include missile subsystems, production facilities, and production equipment for missile systems capable of delivering a 500 kg payload to at least a 300 km range. Category II items include materials, components, and production and test equipment, many of which are dual-use commodities with both civilian as well as military applications.

At its inception, the MTCR was focused on missile delivery systems for nuclear weapons. In 1993, with the threat of chemical and biological weapons highlighted by the Persian Gulf War, the MTCR extended its scope to include delivery systems for all weapons of mass destruction. Category II of the MTCR Annex was then expanded to include missiles with a 300 km range, regardless of payload, as well as major subsystems,

production facilities, and production equipment for such delivery systems.

NMT is responsible for administering controls on exports of dual-use manufacturing equipment for Category I items and on all dual-use items in Category II. A considerable portion of the license applications reviewed for missile-related concerns are for commercial aviation exports, including avionics, navigation, telemetry, composite materials, and test equipment. There are approximately 120 entries on the Commerce Control List that are subject to missile technology controls.

Recent MTCR Actions

In 1998, the MTCR sponsored two workshops for members and selected non members as a continuation of its outreach program to enhance global nonproliferation efforts and to increase the transparency of the procedures countries in the regime use to implement controls on missile technology items. In May 1998, NMT staff represented the United States at the German-hosted MTCR workshop on brokering and “catch-all” controls in which 27 countries participated. The May workshop also introduced the topic of illicit intangible technology transfers. In June 1998, NMT played a leading role at a Swiss-hosted MTCR workshop on risk assessment in MTCR licensing decisions, where 19 countries participated. The June workshop involved the participation of both MTCR partners and non-members and provided participants with ways to identify and assess proliferation risk factors in export licensing decisions.

The 1998 MTCR Technical Experts Meeting (TEM) successfully concluded the reformatting of the MTCR’s Equipment and Technology Annex and agreement was reached “in principle” to implement the changes as soon as possible. This reformatted Annex will make missile technology controls more transparent and ensure equitable multilateral implementation by all regime members. It was also agreed at the TEM that other issues related to the reformatting of the Annex, such as revising MTCR definitions, will be addressed at an intercessional meeting in the spring of 1999.

The 1998 MTCR Plenary focused on candidates for membership, regional nonproliferation efforts, and a possible outreach workshop for MTCR members and nonmembers on intangible technology transfers to be held in 1999. The 1998 Reinforced Point of Contact Meeting had resulted in a consensus to admit The Czech Republic, Poland, and Ukraine as members; this action was affirmed at the 1998 Plenary. Information was also shared at the Plenary regarding activities and programs of missile proliferation concern, and consideration was given to what steps can be taken to prevent the proliferation of delivery systems for weapons of mass destruction in Asia and the Middle East. Discussions were also held on ways to further the MTCR’s efforts to promote openness and outreach to nonmembers. A U.S. proposal for an MTCR-sponsored

workshop in 1999 on transfers of intangible technology received support, and agreement was reached to give further consideration to a technical-level workshop for border guards and Customs authorities on export control enforcement.

The Enhanced Proliferation Control Initiative

In December 1990, the U.S. Government launched the Enhanced Proliferation Control Initiative (EPCI) which led to the imposition of chemical, biological, and missile end-use and end-user-based controls that were similar to the nuclear end-use and end-user-based “catch-all” controls already in effect. The EPCI provisions, implemented in the Export Administration Regulations, require that exporters obtain a license if they have knowledge or are informed by BXA that a proposed export will be used in nuclear, chemical or biological weapons or missile activities. U.S. persons are also restricted from activities in support of nuclear, chemical or biological weapons, or missile-related activities. These regulations are designed to prevent exports that could make a material contribution to proliferation activities of concern but are not intended to affect legitimate commercial trade.

EPCI began as a unilateral control, but with U.S. leadership, a large majority of our nonproliferation regime partners have also incorporated so-called “catch-all” export controls in their legal and regulatory structures. For example, the European Union and Australia implemented catch-all controls in 1995, as did Japan in 1996 and Argentina in 1997. At present, approximately two-thirds of the NSG and MTCR-member countries have some form of “catch-all” controls, and the United States continues to encourage other countries to adopt similar measures. Information exchanges in the NSG on EPCI export denials also have enhanced multilateral awareness of proliferation projects of concern worldwide.

In 1997, the Bureau of Export Administration began publication of an EPCI “Entity List” as part of the Export Administration Regulations. In 1998, BXA continued to add entities involved in proliferation activities to the list. Publication of the names of the entities involved in proliferation activities in the EAR provides exporters with additional information with which to conduct international business.

Industry Interaction

Beyond the routine contacts that are a necessary part of the export licensing process, NMT’s staff participates in many industry briefings, trade association seminars, and one-on-one consultations with exporters to clarify the scope of U.S. nuclear and missile technology controls. These efforts promote U.S. exports by reassuring buyers and sellers alike of the legitimacy of proposed export sales, and advise the participants in the transaction of their export control obligations. One of the industries most directly affected by controls on nuclear technology is the machine tool industry. Machine tools, critical to

the development and production of all technologies, are subject to both nuclear and national security export controls. To ensure that the domestic machine tool industry is fully aware of the constraints on their products, NMT has participated in numerous industry seminars to familiarize industry leaders with the proliferation control regimes.

International Consultations

NMT's staff actively engages in bilateral and multilateral consultations with our trading partners who share our nonproliferation goals, and with countries who do not yet have in place export control systems similar to our own. Repeated and direct bilateral contact with our NSG partners led to the liberalization of controls on oscilloscopes in 1997, and engaging our fellow MTCR members on the need to focus on "catch-all" controls and brokering led to a series of informational seminars advising MTCR members and nonmembers alike on how national controls and laws are implemented. In the last year, NMT has participated in numerous consultations under the auspices of the multilateral control regimes and in support of BXA's overall international outreach effort to educate non participating countries about the benefits and obligations of export control cooperation.