

## A Study on the Export Control System at KAERI

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### 1. Introduction

In the wake of September 11 2001, the worldwide attention to WMDs (Weapons of Mass Production) has been dramatically increased. Building an effective export system including an intangible technology transfer is a key issue in international non-proliferation. The current non-proliferation regime requires strengthening the export control from Korea to foreign countries. This means that the ministries related to export control deeply emphasize the prohibition of the illegal proliferation in the domestic society as well as international society. The principle of export control for non-proliferation of WMD is to control the transfer of the strategic items/technology to the countries which intend to develop the WMD in accordance with the multilateral agreements of the Nuclear Supply Group (NSG), Wassenaar Agreement (WA), Austrian Group (AG) and Missile Technology Control Regime (MTCR). Among them, export controls at KAERI are deeply related to the guidelines of the NSG, an international nuclear export control regime. These guidelines consist of two parts, part 1 (Trigger list) and part 2 (Dual-use list). In addition, the concept of an intangible technology transfer is induced to export control system based on the relevant laws and regulations. In compliance with this situation, KAERI has tried to do its best to strengthen its export control practices and implementation. This is to study and screen its current export control system at KAERI and suggest the best methods to attain its goals.

### 2. Understanding of Export Control System

Basically, export control means controlling strategic items/technology. Strategic items/technology in the general industry exists extensively. Strategic items/technology means the items and technology related to conventional weapon and WMDs as well as missiles transferring such weapons. These types of items and technologies exist ubiquitously in all business areas such as the materials, equipment, and electronic fields. According to the international trade law and regulations, there are 1,400 or so technologies. Even one thinks that technologies such as carbon fabric, fabric production tech. and alloy technology are not to be related to export control. They are directly involved in export control. Indeed, this is the reason why KAERI is concerned about export control in the other R&D fields. Based on the NSG, WA, AG, and MTCR,

the Korea government has established relevant laws and regulations. In accordance with the domestic laws and regulations, KAERI has implemented export control. In 1975, NPT came into force in Korea. The republic of Korea started its export control system with the establishment of foreign trade law and decree. The history of multilateral export control regime in Korea is shown in Table 1

Table I: The history of the export control regime in Korea

Agreements	The ruling date
Nuclear Supplier Group	1995
Austrian Group	1996
Missile Technology Control Regime	2001
Wassenaar Agreement	1996
Chemical Weapons Convention	1997
Biological Weapons Convention	1987

Recently, the concept of an ITT export control system was newly issued in Korea. Even foreign countries such as the US and UK have already introduced ITT (intangible technology transfer) export control from the mid of 2000s.

### 3. Implementation of export control at KAERI

#### 3.1 Export control system using KASIS

KAERI has implemented an export control system based on the international trade laws and regulations. To facilitate the export control, KAERI has been using a Web-based system, KASIS (KAeri Safeguards Information treatment System) of ANSIM. Actually, this system is used to periodically manage and process the nuclear material accounting data at each nuclear facility. However, KAERI needed an intranet system for export control. Accordingly, KASIS included a procedure that the exporter submits the application documents related to the export control through the intranet and store the information data provided to the NEPS controlled by NSSC and YESTRADE controlled by MOTIE. Considering the procedure of using this intranet system, it is not complicated. The researcher submits the relevant documents through the KASIS and a staff of the safeguards team applies for export license to the aforementioned relevant site based on the characteristics of the strategic items/technology. The specific procedure of export control with KASIS is shown in Fig 1.

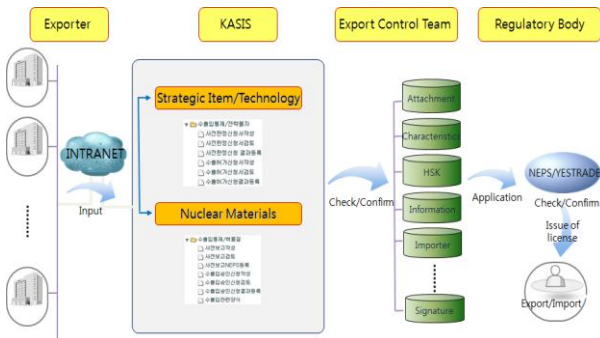


Fig.1. The procedure of export control with KASIS

### 3.2 The current situation of export control at KAERI

Compared with other organizations, KAERI needs to control international trade with two export control systems as shown in Fig.2. The main purpose of KAERI is to develop nuclear technology. Therefore, KAERI has obtained most of the licenses for the international trade from the NSSC (National Safety and Security Commission) through NEPS.

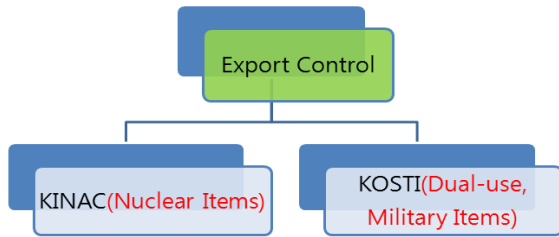


Fig.2. Export Control Systems based on the characteristic of the strategic items/technology

Even though KAERI is deeply related to the NEPS, it should not ignore the dual-use items managed by YESTRADE. For reference, the total amount of export control of KAERI controlled by NSSC on a yearly basis is shown in Table 2.

Table 2: The total amount of export control at KAERI

	Advance Notification	Advance Classification	Export License
2014	11	23	31
2013	10	67	46
2012	14	9	16

As of now, it does not seem that there have been many cases for export control at KAERI. In fact, there has been no problem to conduct export control at KAERI. However, since 2014, the environment of export control has been changed in Korea. The ministry of trade, industry and energy promulgated the revised laws and regulations related to export control in Jan. 2014. According to the revised laws and regulations, the exporter should pay attention to the transfer of intangible technologies such as education and training, consulting, technical advice, sending E-mails and faxing. In light of the punishment of the related laws and regulations, the exporter should know that it is the

right time to acknowledge the revised export control system related to an intangible technology transfer.

### 3.3 The suggestions for KAERI export control system

As mentioned above, since 2014, the current environment of export control in Korea has been changed. KAERI should consider ITT export control owing to the revised export control laws and regulations. To cope with this environmental change, KAERI needs to set three approaches as follows.

- The expansion of organization culture in terms of export control to the staff of KAERI
- The establishment of the new Web-based system to handle intangible technology transfer export control
- The periodic education in terms of export control to all the staff at KAERI

First, in accordance with the multilateral agreements of export control, researchers should pay attention to the transfer of strategic items/technology from the beginning of the project to the end of the project. Accordingly, the researchers should know that the outputs of the project and information given to the foreigners staying at KAERI are likely to be subject to the export control regime. In fact, it does not seem that the researchers care for the export control at present. In this regard, KAERI should expand the culture of export control. Second, considering the intranet system used by KAERI, this system does not seem to be appropriate for the current environmental changes including the introduction of an intangible technology transfer. KAERI had better develop a new Web-based system to catch up with this kind of change. Last, to organize and expand the culture of the export control, KAERI needs to make the periodic education provided by the relevant regulatory bodies, KINAC, and KOSTI. The periodic education is the best way to organize the culture of export control and expand it to all staff members.

## 4. Conclusions

This paper studied the export control system in Korea and described the current state of the export control system at KAERI. Since the new concept of an export system was launched in Jan. 2014, KAERI needs to consider new approaches to meet the requirement of the revised domestic law and regulation. To cope with this environmental change, this paper suggests new approaches to effectively conduct the export control at KAERI.

## REFERENCES

- [1] P. Heine, N. Breland, L. Weiss, T. Dufresne, C. Walker, Building Effective Systems for Nuclear Export Control, INMM Annual Meeting Proceeding 2003.
- [2] K.S. Song, Changed strategic technology transfer system, Science and technology 2014
- [3] KOSTI, the basic course of the strategic trade, 2014
- [4] KINAC, the nuclear control course for the staff working for the safeguards fields, 2014