

Study on CPPNM Interpretation of the Physical Protection Regulatory Aspects for International Transport of Nuclear Material

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1. Introduction

South Korea signed a contract for the nuclear power plant construction project with the UAE in 2009. With regard to the project, the nuclear materials for initial fresh fuel will be internationally shipped from Busan, pass through some countries, and reach to Dubai UAE.

Nuclear energy has been regulated by various international agreements or treaties due to the potential dangers. In case of export or import of nuclear material, it is important to comply with international norms and domestic laws related to nonproliferation and physical protection of nuclear material. Because, if non-compliant, it can be taken nuclear sanctions from the international community, and thus the domestic nuclear activities can be under a negative impact.

The purpose of this paper is to study interpretation of the physical protection regulatory aspects in "Convention on Physical Protection of Nuclear Materials" (CPPNM) for the international transport of nuclear material

2. CPPNM Interpretation of the Physical Protection Regulatory Aspects

2.1 Main Actors of Physical Protection Assurances

Before studying mainly related to main actors of physical protection assurances according to CPPNM Annex1, a survey on the current situation was started.

2.1.1 INCOTERMS

As confirmed from related nuclear licensees, it is discovered that the relationship of the responsibilities totally depends on INCOTERMS¹ that is widely used in the trade between the countries. As a result, it was concluded that nuclear licensees having responsibility under the contract according to INCOTERMS, can be a main actor for providing with physical protection assurances according to CPPNM Annex1. However, there was some limitation which country should have

the responsibility to verify the physical protection assurances provided from the nuclear licensees.

2.1.2 CPPNM

In the article 4 of the CPPNM, it was confirmed that the responsibility relationship between nuclear licensee and government are not mentioned. On the other hand, the relationship between State Parties to CPPNM has been described in detail. State Parties have the responsibility to verify physical protection assurances. CPPNM recognizes the diversity due to the complex situation between nuclear licensees and State Parties. So, another main actor can be determined by the contract according to INCOTERMS and/or agreement between State Parties. And the responsible for receiving assurances may be transferred by mutual agreement. However, it is clear that the State Party has received assurances that such material will during international nuclear transport be protected at the levels described in Annex1. In the article 4 of the CPPNM, it describes as below that which sanctions will be needed when the State Party has not received assurances.

Table 1. Summary of CPPNM Article 4

	Main Actor	Sanctions
1	Each State Party	Shall not export or authorized the export of NM
2	Each State Party	Shall not import or authorize the import of NM from a State no party to CPPNM
3	A State Party	Shall not allow the transit of its territory

2.2 Contents of Assurances

Although the contents on the CPPNM is unclear, IAEA INFCIRC/225/Rev.5 is more specifically explained. It is needed to examine whether the CPPNM signatories as a first step. In other words, if all (export, import, transit) countries involved in transportation are the State Parties to CPPNM, it is simply solved in that the State Party receives only assurances referred to in Annex 1. However, if there are some States that are not parties to CPPNM, it is very complicated.

¹ A glossary terms used in international commerce and trade published by International Chamber of Commerce

2.2.1 Transit States only that are Parties to CPPNM

In fact, it will be ideal that all countries related to international transportation belong to CPPNM. CPPNM signatories automatically are into force the contents of the CPPNM and it effects as international law, so it can be implemented within their country. But, it is necessary to establish whether the government how to receive the assurances specifically mentioned in Annex 1 to the nuclear licensees. In other words, the specific regulatory procedures and contents between nuclear licensees and regulators will be necessary. For example, it is essential to arrange how to interface between an export license and physical protection approval.

2.2.2 Transit States that are not Parties to CPPNM

This case is a little more complicated. Because the meaning of "States that are not parties to CPPNM" is that the requirements required by the Convention does not accept the country as an obligation under international laws. Therefore, the contents in the convention cannot be implemented within the country. So, my conclusion is that the transit country is required to prepare additional actions than the case of CPPNM signatories. The two other methods were derived in response to the questions as follows.

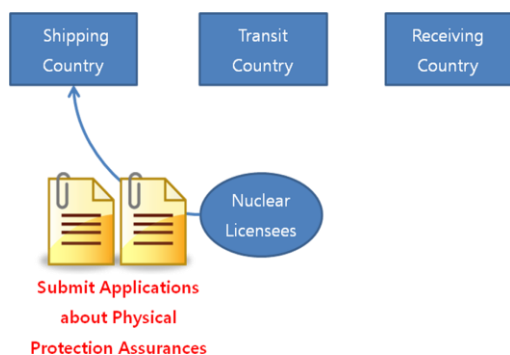


Fig 1. After the shipping country receives physical protection assurances from the nuclear licensees, and gives the export license

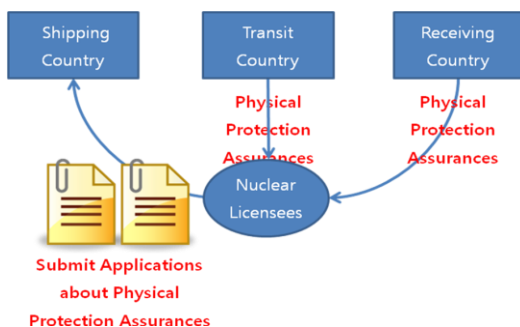


Fig 2. After the shipping country verify the assurances that the nuclear licensees received physical protection assurances from the relevant country, and gives export license

3. Conclusions

Recently, international interests in nuclear security have been increased, it has become very sensitive to whether or not to join, and to comply with international treaties during international transportation of nuclear materials.

Currently it is not discussed yet how to present and interpret the relevant provisions in CPPNM. However, it is necessary to prepare for the dispute among the parties that we don't know when it happens.

It will also be a good opportunity to strengthen nuclear security through proactive response to the proper CPPNM implementation.

REFERENCES

- [1] IAEA INFCIRC/274/Rev.1, The Convention on the Physical Protection of Nuclear Material, IAEA, 1980.
- [2] IAEA INFCIRC/225/Rev.5, Nuclear Security Recommendations on the Physical Protection of Nuclear Material and Nuclear Facilities, IAEA, 2011.
- [3] INCOTERMS 2000, ICC Rules for the Use Domestic and International Trade Terms, International Chamber of Commerce (ICC), 2010.
- [4] INCOTERMS 2000, ICC Rules for the Use Domestic and International Trade Terms, 2010.
- [5] KINAC/TR-005/2015, Technical Report on the Study on the Physical Protection Regulatory Aspects during International Transport of Nuclear Material, KINAC, 2015