A study on the international cooperation through the NSG-DMTE

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1. Introduce

NSG Trigger List was established in 1978 and dual-use items list was established in 1992. The revision of NSG control list was carried out sporadically when the needs arose. However, the rapid growth of the nuclear industry makes revisions of control list frequent [1]. In 2009, NSG Participating Governments (PGs) realized the necessity to revise all controlled items and control specifications. In 2010 NSG plenary, dedicated revision of control list was agreed by all Participating Governments. Revision of controlled items is implemented in the Dedicated Meeting of Technical Experts (hereafter "DMTE"). A final agreement for a total of seven areas will be drawn up in June 2013.

The purpose of reviewing the control list is to harmonize NSG guidelines with the current level of nuclear technology. However, unnecessary control of items is likely to cause negative impacts on the development of the domestic nuclear power industry according to results of the revision. Therefore, the revision of the control list should be carried out carefully by thorough consideration.

It is need to minimize the negative impact on domestic nuclear industries and research institutes due to strengthened export control regime. There is also a need to promote a solid foothold of Korea in NSG through the appropriate response such as new suggestion for the revision.

2. Analysis on the approaches of each PG

NSG Participating Governments proposed a total of 125 proposals to revise trigger list items and dual-use items. Among them, 43 proposals were proposed concerning trigger list items. Eighteen proposals were accepted and 20 proposals were closed or withdrawn, five proposals are on discuss.

Participating governments which suggested proposals are 10 states including the United States (13 proposals), France(8), the United Kingdom (6), Germany(5), Korea(3), Netherland(1), Russia federation(1), Sweden(1), Swiss(1), Canada(1).

Korea showed willingness to achieve nuclear non-proliferation by submitting 3 proposals related to revision of control list as below.

Proposal	Agreed Meeting
Primary coolant pumps	The 6th DMTE
Nuclear reactor internals	The 5th DMTE
Neutron detection and measuring instruments	The 5th DMTE

A nuclear reactor vessel whose control specification needs revision is divided with reactor body & vessel head largely. The vessel head is already included in the "major shop fabricated part" which is expressed in the current guidelines, so there is no need to include it in the Explanatory Note [2].

The designation of reactor internals for using is different by each reactor type so it is desirable to describe major function and mention designation in the Explanatory Note.

The neutron detection and measuring instruments have unclear range of controlling. So the detector and pre-amplification instruments as especially designed or prepared instruments for using reactor should be described. In addition, it is desirable to express the control specifications about pre-amplification instruments.

Above three proposals were accepted by NSG Participating Governments at the fifth, sixth DMTE. These revisions provided united control criteria for export control.

the United States proposed 13 agenda, which was most among PGs. the United States tried to add new items to the control list such as neptunium and to expand the scope of “Nuclear grade graphite, Nuclear fuel cladding” to enforce export control system.

Seven agreed proposals were suggested by the United States among 18 agreed proposals, which show the willingness about non-proliferation and export control. The United States also supported other PGs’ proposals strengthening export control.

France is the coordinator state for the reprocessing field. France suggested many proposals related to fuel fabrication such as reprocessing and laser equipment. Some states worried about pursuing their interests rather than achieving nuclear non-proliferation.

Russian Federation opposed most of agenda. Many of 18 agreed proposals were modified because of Russia Federation’s opposition. Most of 20 closed or withdrawn proposals were due to Russia Federation’s opinion. The number of Russian people attended to the meeting was highest among participant governments. Most of Russian attendants were staffs of ROSATOM which is the Russian nuclear state corporation. It seems to reflect opinion of Russian nuclear industries.

3. Analysis on the process of discussion

It is difficult to persuade all PGs except some cases. In this study, the process to reach consensus on a multilateral meeting was analyzed.

The most common method used by the United States to achieve consensus, was the pre-negotiation with the

opposite of the country. Pre-bargaining agreement by narrowing the disagreement with opposing countries through bilateral discussions rather than multilateral discussions can lead to consensus more easily. Japan and Russia showed reserve position to the proposal "the neutron detection and measurement device". Requests for comment on the amendment and requirements before the next meeting help to derive the agreement easily.

Cooperation with like-minded states is a useful approach to draw up agreements on proposals. Korea persuaded Russian Federation, Germany, China which show reserve position, cooperating with like-minded states such as the United States, the United Kingdom. Through this activity, the proposal about "Nuclear Reactor Internals" was accepted in the 5th DMTE.

Cooperation with like-minded states is an effective method to make one-to-one discussions many-to-many.

This method can apply to opposing other proposals similarly. Korea objected to proposals related to "Pressurizers" which the United States, Germany, France suggested. Korea governments cooperated with Russian Federation. The proposal was closed in the 5th DMTE without consensus.

Opposing states were requested for the modified proposal in some cases. Concerning to the proposal "Nuclear Reactor", the United States requests that opposing states should submit new proposals. It was agreed by finding common ground on the basis of many modified proposals.

4. Conclusion

The following measures to strengthen international cooperation were derived based on negotiation processes.

◎ *Suggesting proposals*

PGs which suggested proposals in DMTE have many opportunities to have comments on revisions and occupy an advantageous position to dominate discussion.

The active intervention in the fundamental review will invigorate future cooperation activities with many countries.

◎ *Building bilateral communication channel*

It is difficult to grasp the practical position of each country in formal meetings. Sometimes, some proposals are related to some states' national policy and political issues even if the amendments are based on technical reviews. Unofficial diplomatic channels will contribute to build the communication and cooperation with many countries.

◎ *Cooperation with like-minded states*

Joint suggestions of proposals, joint opposition to proposals establish cooperation channels between like-minded states, which may help to manage other proposals. Cooperation with like-minded states can exert a big influence to build consensus considering the decision system of NSG.

REFERENCES

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