

Evaluation of Fall-back Safeguards Mechanism on the State Party Withdrawing from the NPT

Keonhee Lee^{a*}, Byung-Wook Lee^a, Jae Soo Ryu^a, Youngwoo Lee^a

^aKorea Atomic Energy Research Institute, 111 Daedeok-daero 989beon-gil, Yuseong-gu, Daejeon

*Corresponding author: keonhee@kaeri.re.kr

1. Introduction

Under Article X of the Treaty on the Non-proliferation of Nuclear Weapon (NPT), an NPT party has the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of the Treaty, have jeopardized the supreme interests of its country such as national security. Nonetheless, the application of safeguards on all materials and equipment supplied to the State Party should be continued for nuclear non-proliferation. If not, the withdrawal from the NPT would be a great threat to international non-proliferation and security.

The current safeguards system is composed of IAEA safeguards agreements and supplier's safeguards right which is specified in a bilateral nuclear cooperation agreement (NCA). There are three types of IAEA safeguards agreements: Facility-specific Agreement (INFCIRC/66), Comprehensive Safeguards Agreement (INFCIRC/153) for Non-Nuclear Weapons States and Voluntary Offer Safeguards Agreement for Nuclear Weapons States.

This study would identify the fall-back safeguards mechanism in the current safeguards system and evaluate whether the mechanism provides the legal instruments to prevent the diversion of nuclear material and equipment supplied to the State Party withdrawing from the NPT.

2. Fall-back Safeguards Mechanism in the Current Safeguards System

The fall-back safeguards mechanism means a series of legal instruments which enable such safeguards to be continuously applied as long as safeguards is needed. To address a threat caused by the withdrawal from the NPT, the safeguards system shall be still effective despite of a withdrawal and the measures described in the safeguard agreements shall be normally taken to remedy the non-compliance.

2.1 Facility-specific Agreement (INFCIRC/66)

As a condition for the supply of nuclear material and equipment, the recipient state signs the Facility-specific Agreement, known as INFCIRC/66 agreements.

The agreement would lapse only after the termination of safeguards by returning to the State that originally supplied the recipient state with the material and equipment, or consuming/diluting in such a way that the material and equipment no longer usable for any nuclear activity from the point of view of safeguards or have become practicably irrecoverable.

2.2 Comprehensive Safeguards Agreement (INFCIRC/153)

The NPT Non-Nuclear Weapons States sign the Comprehensive Safeguards Agreement, known as INFCIRC/153 agreements, which would remain in force as long as the State is NPT party. While the agreement is in force, the safeguards agreements which have been applied before shall be suspended.

Table I: Comparison among fall-back safeguards mechanism

	INFCIRC/66	INFCIRC/153	Safeguards Transfer Agreement	NCA
Duration of Agreement	·Until safeguards have been terminated	·As long as the State is party to the NPT	·During the period of the NCA	·During the agreed period by both parties
Termination of Safeguards	·Returned to supplier ·Consumed/diluted to be no longer usable for nuclear activity or have/has become practicably irrecoverable	·Transfer out of the State ·Consumption or dilution ·Used in non-nuclear activities	·Return to supplier or transfer to third party ·Same as INFCIRC/66	· Return to supplier or transfer to third party ·Be no longer usable for nuclear activity (varied according to agreement)
Non-Compliance	·Measures in Article XII.A.7 and XII.C of the Statute (XII.A.7) suspend/terminate assistance and withdraw any materials and equipment (XII.C) report the non-compliance to all members, UN Security Council, General Assembly	·Measures in Article XII.C of the Statute	·Measures in Article XII.C of the Statute	·Rights to cease cooperation and to require the return of items transferred
Safeguards in perpetuity	-	-	·Supplier state to exercise effectively its right ·IAEA to provide information available	·Consult and immediately enter into arrangements with IAEA or bilateral parties

2.3 Safeguards Transfer Agreement

The Safeguards Transfer Agreement is under the terms of the NCA between supplier and recipient state. Under the agreement, supplier state agrees that its right to apply safeguards to the items subject to the bilateral agreement will be suspended while they are listed in the Safeguards Inventory of IAEA for recipient state.

When the Agency is unable to ensure non-diversion of those items, the items involved shall automatically be removed from such Inventory and supplier state shall exercise its right thereto.

2.4 Bilateral Nuclear Cooperation Agreement (NCA)

Two governments usually sign bilateral agreement for cooperation including the application of safeguards to the items transferred. The details of the agreement vary according to the requirements by the State Parties.

In general, the Party shall have the rights to cease further cooperation and to require the return of any items and any special fissionable material produced through their use in the case of the other Party's non-compliance including termination or violation of IAEA safeguards agreement.

If the application of IAEA safeguards is not available for any reason, the Parties shall consult and immediately enter into arrangements with the IAEA or between themselves to ensure effective continuity of safeguards.

3. Evaluation of Mechanism for the State Withdrawing from the NPT

After the withdrawal from the NPT, the INFCIRC/153 agreement automatically lapses under the terms of that agreement. Then, the safeguards agreements which have been applied before which have been suspended would become effective as follow:

2.1 Re-effectuation of INFCIRC/66

When the INFCIRC/66 agreement becomes effective, the IAEA would apply safeguards on the items supplied until they are returned to original supplier state, or consumed/diluted enough to be no longer usable for any nuclear activity or have become practicably irrecoverable. If the State denies the application of IAEA safeguards under the agreement, the measures specified in the Statute of IAEA can be exercised such as reporting to all members and to the UN Security Council and General Assembly.

2.2 Re-effectuation of Safeguards Transfer Agreement

When the Safeguards Transfer Agreement becomes effective, the IAEA retains the right to apply safeguards on nuclear material and equipment supplied. If the State denies the application of IAEA safeguards under the agreement, safeguards right would be returned to the

supplier state and IAEA may provide information at request of the supplier.

2.3 Continuous Effect by NCA

The supplier's safeguards right specified in NCA shall continue in effect until such time as the Parties agree that the items subject to the agreement are no longer usable for any nuclear activity from the point of view of safeguards. It means this bilateral commitment on safeguards would be the last legal instrument to apply safeguards on the State.

4. Conclusions

To prevent diversion of nuclear material and equipment supplied to the State withdrawing from the NPT, legal instruments for continuous application of safeguards are needed. As discussed above, the fall-back safeguards mechanism set forth in each safeguards agreement can play a crucial role in preventing nuclear proliferation.

In this context, two recommendations are suggested:

- (1) Supplier states have to specify their safeguards right explicitly in NCA and exercise effectively, if necessary. To have universality, the requirement to be included in every NCA could be discussed in international non-proliferation community.
- (2) To close the existing loophole in the termination of INFCIRC/153 agreement from the NPT withdrawal, additional instruments such as signing on additional INFCIRC/66 agreement, as an international norm, can be considered in advance. Based on INFCIRC/66 agreement, IAEA and UN Security Council would continue to play an important role in non-proliferation. In particular, the state without other IAEA safeguards agreements or the state with enrichment and reprocessing facilities should be the first to sign INFCIRC/66 agreement.

REFERENCES

- [1] INFCIRC/66/Rev.2
- [2] INFCIRC/111
- [3] INFCIRC/153
- [4] INFCIRC/252
- [5] Pierre Goldschmidt, "Safeguards Noncompliance-A Challenge for the IAEA and the UN Security Council", Arms Control Association (2015)
- [6] Pierre Goldschmidt, "Securing Irreversible IAEA Safeguards to Close the Next NPT Loophole", Arms Control Association (2015)
- [7] "Senate Reports Nos.284-292", United States Congressional Serial Set, Serial Number 15011 (2006)
- [8] Robert Einhorn, "Non-proliferation Challenges Facing the Trump Administration", Arms Control and Non-Proliferation Series Paper 15 (2017)