

Can Verification Measures Apply to Nuclear Material in Non-Proscribed Military Use by a State with a Comprehensive Safeguards Agreement?

Supplement to the paper of 8 October 2021 on IAEA Safeguards, the Naval “Loophole” and the AUKUS Proposal

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Under comprehensive safeguards agreements (CSAs) based on IAEA document INFCIRC/153, non-nuclear-weapon states (NNWSs) can conclude arrangements with the IAEA for the “non-application” of safeguards to nuclear material in a non-proscribed non-peaceful use, that is, a military use that is not for nuclear weapons or other nuclear explosive devices. This reflects the provisions of the NPT, which prohibits a NNWS acquiring nuclear weapons or other nuclear explosive devices, and requires the application of IAEA safeguards on all nuclear material in the state in peaceful use. By inference, a NNWS can have nuclear material in non-explosive military use outside IAEA safeguards.

The relevant provision of INFCIRC/153 is paragraph 14. Paragraph 14 provides for the “non-application” of “the safeguards provided for in the Agreement”, but only while the nuclear material is in the non-proscribed military use. Safeguards are to apply again as soon as the material is re-introduced into a peaceful nuclear activity. If the state wishes to make use of paragraph 14 it must inform the IAEA, making it clear the material will not be used for production of nuclear weapons. The state is required to conclude an arrangement with the Agency, identifying the period or circumstances during which safeguards will not be applied, and keeping the Agency informed of the total quantity and composition of such unsafeguarded nuclear material. The arrangement should “only relate to temporal and procedural provisions, reporting arrangements, etc.”, but should not involve any approval or classified knowledge of the military activity.

This paper considers the question, does paragraph 14 exclude any safeguards activity by the IAEA in relation to nuclear material that is subject of a paragraph 14 arrangement?

Agency not to further any military purpose

The first point to consider is whether the Agency is excluded from applying safeguards measures to nuclear material in non-proscribed military use because of the provision in the Statute that:

... so far as it is able, (the Agency shall ensure) that assistance provided by it ... or under its supervision or control is not used in such a way as to further any military purpose. (Article II)

The application of safeguards can hardly be considered as “assistance”, so this provision in itself does not exclude safeguards.

The next reference to military purpose is in Article III, concerning safeguards. The Agency is authorised to:

... establish and administer safeguards designed to ensure that (nuclear materials etc.) made available by the Agency or ... under its supervision or control are not used in such a way as to further any military purpose. (Article III.A.5)

Nuclear material that is not made available by the Agency cannot be considered to be “under its supervision or control” by virtue of the application of safeguards. “Supervision or control” implies authority over the activity concerned – the supervisor can intervene to ensure the activity is carried out correctly. The IAEA has no such authority, it cannot direct a state to act

in a particular way, all it can do is report if it finds a violation. Thus provision does not exclude the Agency from applying safeguards.

Article III.A.5 goes on to say, the Agency is authorised:

... to apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement, or at the request of a State, to any of that State's activities in the field of atomic energy.

This part of Article III.A.5 is not qualified by any reference to military purpose. The Statute does not exclude safeguards from nuclear material in a military activity "in the field of atomic energy" if a state so requests, and obviously, if the activity is permitted by any other applicable agreement.

NPT

The provisions of the IAEA Statute and the NPT differ with respect to military activities. As noted, the Statute refers to "any military purpose". The NPT refers to "peaceful purposes" but does not limit a NNWS to using nuclear material solely for peaceful purposes.

The NPT prohibits a NNWS from acquiring nuclear weapons (Article II), and requires a NNWS to accept IAEA safeguards on all nuclear material in peaceful activities (Article III.1). The consequence of these provisions is that the NPT permits a NNWS to use nuclear material in a non-proscribed (that is, non-explosive) military activity, and it is not obligatory to accept safeguards on nuclear material in such activity. Though not mentioned in the treaty, this approach was taken to allow for the possibility of naval propulsion reactors. The reason for leaving this area outside safeguards appears to be to ensure protection of classified information.

The result is a somewhat problematic situation, which the NPT negotiators did not address adequately, namely, that all the nuclear material in a NNWS is subject to the prohibition against nuclear weapons, but potentially some of this material – the material in use as naval reactor fuel – is not covered by safeguards, so *prima facie* the IAEA is not able to verify that this material is not diverted to nuclear weapons. This could, depending on the circumstances, jeopardise the object and purpose of the NPT.

Comprehensive safeguards agreements

Reflecting the wording of the NPT, INFCIRC/153 provides that safeguards apply to all the nuclear material in a NNWS that is in all peaceful activities. Paragraph 14 allows for the non-application of "the safeguards provided for in the agreement" to nuclear material while it is in non-proscribed military use. This leaves the problem inherent in the NPT, that *prima facie* the IAEA is not in a position to verify this material is not diverted to nuclear weapons.

The negotiators of INFCIRC/153, the Safeguards Committee established by the IAEA Board of Governors, was very mindful of this problem. The Committee recognised the need to protect classified information, but was also anxious to avoid paragraph 14 becoming a loophole for diversion of nuclear material to nuclear weapons. The Committee expressed the intention that the scope of "non-application" of safeguards should be circumscribed as far as possible.

Measures that might be included in a paragraph 14 arrangement

There is nothing in the documents – the Statute, the NPT or INFCIRC/153 – to specifically exclude safeguards. Paragraph 14.(c) says the arrangement "shall only relate to the temporal and procedural provisions, reporting arrangements, etc.," but it is open to the state and the IAEA to agree to whatever they consider appropriate. The Statute authorises the Agency to apply safeguards, at the request of a state, to any of its activities in the field of atomic energy (Article III.A.5). Paragraph 14 does not limit the scope of any such request.

Why should the state consider doing more than a literal reading of paragraph 14 seems to require? The primary responsibility of the state and the Agency is to demonstrate that the NPT prohibition against nuclear weapons is being honoured. If there are major concerns about this

– if the IAEA considers it cannot provide assurance on the non-diversion of nuclear material by the state – this will undermine the international confidence that the NPT is intended to provide. Such a situation is not in the interest of the state or the Agency, nor is it in the interest of the international community. Accordingly, a careful balance is required, between the legitimate concern of the state to protect classified information and the international community’s interest to ensure nuclear material is not diverted to nuclear weapons.

Conclusion

Some of the verification activities that might apply are outlined in the main paper (dated 8 October 2021). In considering the kind of verification activities desirable, the Agency needs to undertake a realistic risk analysis – some if not most hypothetical diversion scenarios may well be implausible, so pragmatic qualitative verification measures may well suffice in place of the usual measures employed in routine safeguards. If a state insists on the absolute minimum, based on a narrow reading of paragraph 14, and if the Agency can show this is inadequate, the Board should not agree to an unsatisfactory arrangement. It is to be hoped that common sense will prevail. In this regard the first use of paragraph 14 (in the case of Australia? Brazil?) will be very important for the precedent it sets.