

Information Circular

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Communication from the Permanent Mission of the People's Republic of China to the Agency

1. On 29 May 2024, the Secretariat received a Note Verbale, together with an attachment, from the Permanent Mission of the People's Republic of China to the Agency.

2. As requested, the Note Verbale and its attachment are herewith circulated for the information of all Member States.



中华人民共和国常驻维也纳联合国和其他国际组织代表团 PERMANENT MISSION OF THE PEOPLE'S REPUBLIC OF CHINA TO THE UNITED NATIONS AND OTHER INTERNATIONAL ORGANIZATIONS IN VIENNA

No. CPMV/2024/71

The Permanent Mission of the People's Republic of China to the United Nations and other International Organizations in Vienna presents its compliments to the Secretariat of the International Atomic Energy Agency, and has the honor to present to the latter the summary of the workshop "AUKUS: A Case Study about the Development of IAEA Comprehensive safeguards" which was organized by the Permanent Mission of China on 10 May 2024, at Vienna International Center.

It is the hope of the Permanent Mission of China that this Note, together with the attached summary, will be duly circulated to all Member states as an INFCRIC document in a timely manner.

The Permanent Mission of the People's Republic of China to the United Nations and other International Organizations in Vienna avails itself of this opportunity to renew to the Secretariat of IAEA the assurances of its highest consideration.



The Secretariat of International Atomic Energy Agency VIC, Vienna 1400

Chair's Summary¹

AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards

Workshop organized by the Permanent Mission of China VIC CR-1: 10 May 2024

Note: This summary has been prepared for information of the Board of Governors meeting in June 2024 as well as to facilitate an intergovernmental discussion process on the AUKUS nuclear submarine acquisition programme within the framework of IAEA, with the objective of enhancing the awareness of Member States regarding the sensitivity and complexity of the safeguards issues concerning any implementation of Paragraph 14 of INFCIRC/153 (Corr.).

On May 10, a workshop titled "AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards" was organized by the Permanent Mission of China at the Vienna International Centre (agenda as well as full presentations are attached). The workshop was attended by more than 100 representatives from over 50 Member States of the International Atomic Energy Agency (IAEA) and academies. H.E. Ambassador Li Song, Permanent Representative of the People's Republic of remarks China made introductory the workshop. an to Australia's Resident Representative to the IAEA H.E. Ambassador Ian Biggs also attended the workshop and shared his views.

Based on discussions during the first workshop on AUKUS hosted by the Permanent Mission of China a year ago, this year's workshop focused on various aspects of the proposed AUKUS nuclear submarine cooperation and its implications for the Agency's comprehensive safeguards system. Four expert panelists made presentations, in their personal capacity, and provided assessments and comments:

- Ms. Laura Rockwood, Senior Fellow of the VCDNP, Former Section Head for Non-Proliferation and Policy Making Organs, IAEA Office of Legal Affairs, addressed "IAEA safeguards tradition: typical and historical cases for the development of IAEA safeguards system, including arrangements related to the non-application or special procedures of safeguards";
- Mr. Anton Khlopkov, Director of the Center for Energy and Security Studies in Moscow, covered "AUKUS and its transfer of weapon-grade nuclear material:

¹ This Chairs' Summary is solely for information purposes; it reflects the main topics raised and areas of discussion that were relevant to the announced theme, and it does not intend to seek agreement of all participants nor purport to be all inclusive and comprehensive.

new practice, new territory and new development of IAEA safeguards";

- Mr. Tariq Rauf, Former Head of Verification and Security Policy Coordination, Office reporting to the IAEA Director General, analyzed "Paragraph 14 and AUKUS: whether an universally applicable method is necessary/feasible? How to define non-discriminatory and universally applicable safeguards approaches, safeguards objectives, safeguards measures, and special procedures?";
- Mr. Guo Xiaobing, Senior Fellow of the China Institute of Contemporary International Relations, speaking on "Developing safeguards arrangement on AUKUS: role of the Secretariat, Board of Governors and Member States".

Four additional experts and scholars, invited as commentators, speaking in their personal capacity, provided important inputs to the discussion:

- Mr. Vilmos Cserveny, Former Assistant Director General of the IAEA;
- Mr. Nikolai Khlebnikov, Russian Representative at the IAEA Standing Advisory Group on Safeguards Implementation (SAGSI), Former Director of the Division of Technical Support of the IAEA;
- Mr. Naeem Ahmad Salik, Executive Director of Strategic Vision Institute, Islamabad;
- Mr. Zhao Xuelin, Research Associate of China Institute of Nuclear Industry Strategy.

Mr. Ionut Suseanu, Head of the Non-Proliferation and Policy-Making Organ Section, Office of Legal Affairs of the IAEA, on behalf of the IAEA Secretariat, made a presentation relevant to the legal aspects of the agenda items of the workshop. The participants of the workshop discussed a number of points made in his presentation. (The presentation entitled "Elements presented by the Secretariat during the Workshop on 10 May 2024", as provided by Mr. Suseanu, is attached.)

In this workshop the following views, *inter alia*, as summarized by the Chair, were highlighted by the presenters and discussants.

1. The AUKUS cooperation is for the first time that two nuclear-weapon States, based on geopolitical consideration, intend to carry out nuclear submarine cooperation with a non-nuclear-weapon State military ally and shall involve the transfer of naval nuclear propulsion reactors fueled with a large quantity of weapons-grade highly-enriched uranium (HEU), projected to utilize 4 tonnes of 93%-97% HEU, sufficient to produce 160 nuclear explosive devices.

2. The AUKUS nuclear submarine cooperation is clearly not a routine and

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peaceful safeguards project between non-nuclear-weapon States members of the Agency and the IAEA Secretariat. And, the AUKUS project is fundamentally different from the indigenous development of nuclear-powered submarines fueled by low-enriched uranium (LEU) by some non-nuclear-weapon States, in particular, in terms of future verification activities.

3. The application and implementation of Paragraph 14 of INFCIRC/153 (Corr.) on the non-application of Agency safeguards on non-proscribed military activities presents novel challenges. This would establish a significant precedent, challenging the correctness and completeness of declarations of nuclear activities by NPT non-nuclear-weapon States (NNWS) and the integrity of the international nuclear non-proliferation regime based on the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

4. The non-application of Agency safeguards on multiple significant quantities (SQs) of weapons-grade highly enriched uranium in nuclear-powered attack submarines is unprecedented. If this matter is not addressed in an open, transparent, accountable and inclusive manner, could adversely affect the integrity and authority of the IAEA's safeguards system and associated verification practices.

5. The prospect of implementing Paragraph 14 of INFCIRC/153(Corr.) raises numerous policy, legal and technical issues due to lack of clarity and lack of definitions given the poor and inexact drafting of key elements of Paragraph 14. The scope of application and limitations concerning implementation of Paragraph 14 have never been defined or elaborated, and as such have never been considered or assessed by the IAEA Board of Governors for purposes of approval or "appropriate action". Limited legal consideration by the Secretariat on this matter does not provide any precedent or practical experience to address practices and concerns regarding implementation of Paragraph 14-type arrangements by NPT NNWS parties.

6. The IAEA safeguards conclusions are based on evidentiary standards. Therefore, any arrangement for the non-application of safeguards to non-proscribed military activities must be transparent and accountable to the Agency (General Conference and Board of Governors) and all other States with Comprehensive Safeguards Agreements (CSAs) in force. The IAEA General Conference has yet to consider this matter and to reach any related understandings relevant to the implementation of CSAs, thus underscoring the urgent need for further dialogue.

7. The Secretariat and IAEA Member States should consider establishing or utilizing various forums for contributing to the development of agreed common understandings

concerning the "arrangements" referred to as necessary under Paragraph 14 of CSAs, including special committees of the Board, independent international technical experts, the Standing Advisory Group on Safeguards Implementation (SAGSI), and technical briefings and meetings on the non-application of safeguards in the context of the AUKUS nuclear submarine programme, all the parties concerned and interested Member States should be included in the above mentioned efforts.

8. Before NNWS can use nuclear material outside of safeguards and intended for non-prohibited military nuclear activities, there need to be agreed understandings on the concepts, terms and implications of any implementation of Paragraph 14 of INFCIRC/153 (Corr.). Regardless of the final form of any arrangement reached, it must be designed to not adversely impact the credibility and universality of application of CSAs.

9. Attendees extended their appreciations to Ambassador Li Song for convening this workshop and his introductory remarks, welcomed the presence and statement of Ambassador Ian Biggs, Permanent Representative of Australia to the IAEA, noting that consistent, open, and transparent engagement between AUKUS partners, Member States, and the Secretariat, is urgent and essential, and encouraged AUKUS partners' participation in future workshops and discussions on Paragraph 14 of INFCIRC/153 (Corr.). During the workshop the usefulness of continuation of the practice of similar seminars in the future was also highlighted.

Different views and concerns were expressed during the workshop, which further reflected the complexity and controversy of the AUKUS cooperation.

1. The workshop briefly reviewed the negotiating history of Paragraph 14 of INFCIRC/153(Corr.), as well as various approaches the IAEA has taken in practice in developing procedures and guidance on safeguards-related matters. Some views suggested there have been very limited in-depth policy considerations by the Agency on this matter in the past and no practical experience exists on the interpretation or implementation of Paragraph 14 type of arrangements by NPT parties and the Agency's Secretariat. Some views claimed that naval nuclear propulsion is not prohibited under the NPT and INFCIRC/153 (Corr.). While other views emphasized the crucial role of Member States and technical experts, including the SAGSI, in addressing novel and complex technical safeguards questions as they arose in the past.

2. Opinions on the application of Paragraph 14 remained controversial. Some views suggested that given the nature of the AUKUS nuclear-powered submarine

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collaboration and its precedent-setting nature, the matter must first be subject to Board discussion and consensus-based decision-making, and that working transparently and within the framework of legal agreements is fundamental to the nuclear non-proliferation regime. Other views claimed that Paragraph 14 was included by the negotiators to ensure that the exclusion from safeguards of nuclear material for such a military use would not serve as a loophole for the diversion of nuclear material to a weapons programme. They noted that this is reflected in almost all CSAs concluded by the IAEA, with the paragraph numbers in INFCIRC/153(Corr.) corresponding, by and large, to article numbers in the actual CSAs. Some views emphasized that it is still an open question as to who has the right to interpret Paragraph 14 and its application.

3. In this regard, the role of the Secretariat, the Board of Governors and Member States on interpreting and developing AUKUS safeguards arrangements remained a controversial issue in the discussions. Some views stressed that arrangements should involve discussions and consensus among IAEA Member States, including the Board of Governors, to maintain the universality and effectiveness of the Agency's safeguards system. While other views insisted that the Board of Governors should play a more leading role in developing policy and technical understandings regarding Paragraph 14. Some views claimed that Paragraph 14 does not, on face value, require Board approval; nor does it not preclude it; and that therefore any such arrangement would be brought before the Board for "appropriate action", and it would be for the Board to decide on what would be the "appropriate action" (in this context it was recalled that the IAEA Secretariat, historically, is on record to have agreed with the view that an arrangement referred to Article 14(b) would be referred by the Secretariat to the Board of Governors and would require its approval). In contrast, other views maintained that matters concerning the interpretation and implementation of the Comprehensive Safeguards Agreement, including Paragraph 14, are inherently political and must involve all IAEA Member States and NPT States Parties.

4. Regarding the implications of AUKUS nuclear-powered submarine cooperation, some views stated that given the unprecedented nature of the AUKUS collaboration involving transfer of large quantities of weapons-grade highly-enriched uranium outside of safeguards; any safeguards approach to be developed would define future application of Paragraph 14 on nuclear-powered submarine acquisition programmes. Hence, professional technical and governmental open-ended discussions among Member States within the Agency framework are deemed necessary and essential. Some views expressed concerns regarding the implications of HEU fuelled nuclear-powered submarine programmes may have on the future implementation of policies about the minimization of the use of HEU in nuclear applications on which wide ministerial level support is expected at the forthcoming International Conference

on Nuclear Security (ICONS2024) organized by the IAEA in Vienna.

The divergence of the aforementioned viewpoints highlights the importance and necessity of a comprehensive, inclusive and transparent intergovernmental discussion process on AUKUS. The discussion on the AUKUS case-study and its proposed "arrangement" on the non-application of safeguards is only the beginning of such process. The following questions were raised during the workshop, these warrant further in-depth thinking and discussion involving of all interested IAEA Member States:

- Who has the right or authority to interpret Paragraph 14 of INFCIRC/153 (Corr.)? Does the IAEA Secretariat have the authority or mandate to interpret the provisions of the NPT without the involvement of Member States?
- How would "a non-proscribed military activity" be defined, and by whom?
- What is the definition of "the Agency": is it the Member States, the Director General, the Secretariat; or is the Agency the collectivity of the Member States along with the Director General, and the Secretariat?
- Why have not the Board and Member States taken a leading role in developing policy and technical understandings regarding INFCIRC/153 (Corr.) Paragraph 14 implementation?
- What could be credible safeguards approaches and related technical objectives for HEU-fueled naval nuclear propulsion reactors and fuel?
- How will reaching a broader conclusion under the Additional Protocol be impacted in the case of a NPT NNWS implementing the INFCIRC/153 (Corr.) Paragraph 14 non-application of safeguards to nuclear material to be used in non-peaceful activities?
- How would the comprehensive safeguards agreement deal with the matter of the transfer to a NPT NNWS of HEU-fueled naval nuclear propulsion reactors?
- What technical measures of safeguards will apply to maintenance activities to be conducted on nuclear-powered submarines (SSNs) in ports in Australia starting in the second half of 2024.
- How would the IAEA determine the credibility and accuracy of "classified knowledge of the military activity" and to "the use of the nuclear material therein"? Would the IAEA have access for design information verification (DIV) for naval nuclear reactors?
- Does the Paragraph 14 (c) reference that the reporting arrangements shall not involve any approval or classified knowledge of the use of nuclear material in the military activity requiring non-application of safeguards imply that the State is under no obligation to inform the Agency of the claimed nuclear activity (whether

naval nuclear propulsion or other)?

- Who would decide what is deemed classified knowledge of the military criteria, and based on what criteria?
- Can application of safeguards to the AUKUS submarine project be considered as technical "assistance", and whether this kind of "assistance" would violate Article II of the IAEA Statute?
- What safeguards measures would be required for implementation by Australia to ensure accountability and transparency of its nuclear-powered submarine project, especially given that four or more tonnes of weapons-grade highly enriched uranium will be in use?
- How would the IAEA verify the correctness and completeness of the declaration by the State on the total quantity and isotopic composition of the nuclear material not under safeguards in use in a non-proscribed military activity?
- Is the interpretation of the safeguards arrangement of AUKUS to be developed in accordance with Paragraph 14 within the exclusive jurisdiction of the Secretariat or of the Board?
- What would be the scope and content of the reporting arrangements for the non-application of safeguards on non-proscribed military activities?
- How to evaluate the challenges of the unprecedented AUKUS project to the existing IAEA safeguards system, especially with regard to the Agency's standard practice of inclusive, transparent, open-ended consultations involving all interested Member States on all matters of safeguards, safety and security, as well as to the tradition of consensus on issues concerning each and every major step of the development of IAEA Safeguards?
- What support could be provided by interested Member States to the Director General and the Secretariat to facilitate open-ended consultations and technical briefings on matters concerning interpretation and implementation of Paragraph 14?
- What role the Secretariat should play to facilitate the intergovernmental discussion process on AUKUS?
- Will the Safeguards arrangement of AUKUS nuclear submarine cooperation serve as a precedent and guideline for potential similar collaborations in the future?

AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards

(VIC CR-1, 14:00 10 May)

Opening remarks by the Moderator

Introductory remarks

H.E. Amb. Li Song, *Permanent Representative of the People's Republic of China* to the United Nations(Vienna)

H.E. Amb. Ian David Grainge Biggs, *Permanent Representative of Australia to the United Nations(Vienna)*

Panel 1: IAEA safeguards tradition: typical and historical cases for the development of IAEA safeguards system, including arrangements related to the non-application or special procedures of safeguards.

Panelist: Laura Rockwood, Senior Fellow of the VCDNP, Former Section Head for Non-Proliferation and Policy Making in the Office of Legal Affairs of the IAEA

Panel 2: AUKUS and its transfer of weapon-grade nuclear material: new practice, new territory and new development of IAEA safeguards.

Panelist: Anton Khlopkov, Director of the Center for Energy and Security Studies, Russia

Panel 3: Article 14 and AUKUS: whether an universally applicable method is necessary/feasible? How to define non-discriminatory and universally applicable safeguards approaches, safeguards objectives, safeguards measures, and special procedures?

Panelist: Mr. Tariq Rauf, Former Head of the Verification and Security Policy Coordination Office of the IAEA

Panel 4: Developing safeguards arrangement on AUKUS: role of the Secretariat, Board of Governors and Member States.

Panelist: Guo Xiaobing, Senior Fellow of the China Arms Control and Disarmament Association (on-line)

Commentators

Mr. Vilmos Cserveny, Former Assistant Director General of the IAEA Mr. Nikolai Khlebnikov, Russian Representative at Standing Advisory Group on Safeguards Implementation of the IAEA, Former Director of the Division of Technical Support of the IAEA

Mr. Naeem Ahmad Salik, *Executive Director of Strategic Vision Institute*, *Pakistan* (on-line)

Mr. Zhao Xuelin, *Research Associate of China Institute of Nuclear Industry Strategy* (on-line)

Representative of IAEA Secretariat

Mr. Ionut Suseanu, Head of the Non-Proliferation and Policy-Making Organs Section, Office of legal Affairs of the IAEA

Q&A session

Conclusion by the Moderator

Introductory Remarks by H.E. Ambassador Li Song at the Workshop on "AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards"

Distinguished ambassadors, experts and colleagues,

Thank you for joining us at this workshop. A year ago, the Chinese Mission held the first workshop on AUKUS at the VIC, which played an useful role in facilitating the intergovernmental discussion process within the framework of the IAEA. Building on that, and taking into consideration of the discussions among member states over the past year, today's workshop is to provide again an open and inclusive platform for the continued and in-depth discussions on issues regarding AUKUS, focusing on a case study about the development of IAEA comprehensive safeguards regime.

I thank all the panelists and commentators who join us today. Look forwards to your contributions to our workshop. I would like to welcome all the ambassadors, experts and colleagues attending today. I want to extend a special welcome to H.E. Amb. Biggs of Australia for joining us and sharing his views. I also welcome Mr. Suseanu from the IAEA Secretariat. I always believe that Secretariat should engage more and listen carefully to the views, concerns and propositions of wider range of member states on AUKUS, and to maintain communication and discussion with us.

Over the past two years, AUKUS has been an important and sensitive issue of wide concern to the international community. As we all know, the AUKUS cooperation is for the first time that two nuclear-weapon States, based on geopolitical purposes, have carried out nuclear submarine cooperation with a non-nuclear-weapon military ally and involves the transfer of nuclear power reactors and a large amount of weapons-grade HEU. This cooperation is clearly not a routine and peaceful safeguards

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project between IAEA non-nuclear-weapon member States and the Secretariat. And it is fundamentally different from the indigenous development of nuclear-powered submarines by non-nuclear-weapon member States.

On the basis of the above-mentioned important factors involved in the AUKUS project, China is of the view that the IAEA Secretariat and all Member States, including the AUKUS countries, should view the unique and significant impact of the AUKUS cooperation to the integrity, effectiveness, authority and universality of the NPT and IAEA regimes in a serious and responsible manner. Bering this in mind, it is also necessary to conduct in-depth discussions at the technical and legal levels on various aspects of AUKUS within the framework of the IAEA.

The AUKUS partners insist to say that AUKUS should be regarded as a routine safeguards project. After in-depth discussions within IAEA since last year, it is clear that not all the IAEA Member States believe so. No matter what kind of safeguards arrangements are to be reached between the AUKUS partners and IAEA Secretariat, these arrangements will surely bring the Agency' s safeguards practice to new territories and uncharted waters, and setting important example or precedents. I hope that this workshop will be conducive to a better understanding on the complicity of the above aspects of AUKUS in the context of IAEA, as well as on the importance and necessity of upholding the IAEA tradition of IAEA safeguards mechanism. Only in this way will it be possible to continue to ensure the authority, effectiveness and universality of the IAEA safeguards mechanism, as well as the further efforts to promote the universality of this regime.

I would also like to emphasize that today' s workshop is open to all the IAEA member states. It is not a campaign about taking sides. All the IAEA member states and the Secretariat should stand on the side of safeguarding the authority and effectiveness of the NPT regime and IAEA safeguards mechanism. In this regard, I invite Amb. Biggs to side with me. Let' s work together in the intergovernmental discussion process,

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respect and listen carefully to each other's views and concerns, and address the challenge of AUKUS and the issue of the development of IAEA safeguards regime in the most responsible and professional manner.

I do hope with the support and participation of all participants, this workshop will make new contributions to the intergovernmental discussion process. Looking forward to benefiting from your wisdoms, insights and expertise.

Thank you!

Australia's Naval Nuclear Propulsion Program

Remarks by HE Ambassador Ian Biggs, Permanent Representative of Australia to the IAEA

at 'AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards'

10 May 2024

Excellencies, colleagues

I was invited by my friend Ambassador Li to speak on AUKUS partners' cooperation and our engagement with the International Atomic Energy Agency Secretariat, during the introductory segment of this workshop.

You won't be surprised to know that I had to think about the invitation, for it is unusual for one country to direct and organise, and I quote, 'a platform for a case study', targeted at another country's sovereign endeavour and bilateral engagement with the IAEA.

But transparency is almost always good, and I really would be concerned if there was such an event about us, without us.

So, I decided to accept the invitation and address a number of fundamental points in connection with the topics which feature on the agenda of this workshop.

If you will allow me, I take this opportunity to explain:

- what AUKUS is, and what it isn't;
- the legal framework, on the basis of which the IAEA is currently progressing consultations on naval nuclear propulsion separately with Australia and Brazil; and
- the importance of respecting the technical authority and independence of the IAEA in implementing its safeguards mandate.

First, what is AUKUS?

AUKUS is a technology and capability sharing partnership between Australia, the United Kingdom and the United States, three countries with longstanding defence ties.

Australia is facing an extraordinarily rapid military build-up by others in our region, the Indo-Pacific. A build up that is occurring with limited transparency.

In this environment, we see enhanced capabilities as necessary for reducing the risk of conflict.

Through AUKUS, Australia is investing transparently to enhance our ability to make a credible contribution to maintaining strategic balance, and the rules and norms that have long supported stability in our region.

This is only one component of Australia's overall approach, which also supports the region's aspirations for economic development, critical infrastructure, and the clean energy transition.

Transparency, as well as strict and full adherence to our international obligations is key to our approach.

These have been and will continue to be core principles underpinning Australia's participation in the AUKUS partnership.

And I hope that you will recognise that our approach has been fully consistent with these principles.

The AUKUS partnership's centrepiece, which we call AUKUS Pillar One, is Australia's planned acquisition of conventionally armed, nuclear-powered submarines.

Australia has had submarines since the 1910s – 110 years. Through AUKUS, Australia will work to transition our existing fleet of six diesel-powered submarines to eight conventionally armed, nuclear-powered submarines.

Importantly, cooperation on Pillar One – naval nuclear propulsion – is and will remain exclusively trilateral between Australia, the United Kingdom and the United States.

It will remain distinct from the other, separate part of AUKUS, known as Pillar Two Advanced Capabilities, which translates cutting edge technology into practical capabilities.

Pillar Two, and any cooperation with additional partners on Pillar Two projects, will not include naval nuclear propulsion information, technology, or materials.

Naval nuclear propulsion itself is not a new capability, neither globally nor in our region.

There are over 40 countries worldwide that cumulatively operate nearly 500 naval submarines – around 135 of which are nuclear-powered.

We recognise that the acquisition of this capability by a non-nuclear-weapon state is new and carries with it a responsibility to ensure that the highest standard of non-proliferation is met.

I expect you will hear today that Australia's acquisition of this capability on the basis of Article 14 is 'controversial'.

This is a curious assertion.

So, what is Article 14?

Director General Grossi addressed this question very clearly in his statement to the International Atomic Energy Agency Board in June 2023, which I invite you all to revisit.

The DG stated:

- It is a provision originally approved and reflected in paragraph 14 of INFCIRC 153.
- It was developed with the specific intent to address the use of nuclear material required to be safeguarded under a safeguards agreement, whether produced domestically or imported, for naval nuclear propulsion.
- And it is part of the legal framework set out in safeguards agreements concluded on the basis of INFCIRC 153 and, as such, included in Australia's bilateral CSA and the other CSAs approved by the Board of Governors in the past 50 years as well as the quadripartite safeguards agreement of Argentina and Brazil.

The DG then set out how, once relevant provisions had been invoked, the IAEA had worked methodically to develop approaches within the applicable legal frameworks, with Canada in 1988, Brazil since 2021 and Australia since 2023.

Of course, it is a process that involves complex technical matters, as the DG has acknowledged.

This process is about developing a robust safeguards and verification approach that ensures that the IAEA can continue to meet its technical objectives – no diversion of nuclear material, no misuse of nuclear facilities, and no undeclared nuclear material or activity.

The technical considerations will reflect factors that are specific to the naval nuclear propulsion program concerned.

So that it is fit-for-purpose, rather than one-size-fits-all.

But to question the applicability of Article 14, as a well-established treaty provision, simply because its application and implementation involve complex technical issues, risks going down a dangerous path.

In this context, I want to highlight that all Member States share an interest in protecting their fundamental right to engage bilaterally and in confidence with the Agency on the implementation of their safeguards agreements.

Which brings me to my final point on IAEA safeguards.

I was pleased to hear Ambassador Li's reference to a commitment to preserving the nuclear non-proliferation system.

Those words describe what lies at the heart of our collective efforts here in Vienna: to preserve and strengthen the non-proliferation architecture of which the IAEA safeguards system is a fundamental pillar.

Over the system's more than fifty-year history, through the changing technological and international landscape, the IAEA has worked continuously to adapt and direct its technical work to meet its practical goal of achieving safeguards objectives in the most effective way.

Member States have certainly contributed to these efforts and have employed a range of mechanisms over the years in doing so.

But colleagues, our constructive contribution, while important, must not extend to Member States' seeking to direct the IAEA on how to do its work.

If we accept that the IAEA's technical role is an integral part of the non-proliferation system, then it becomes our responsibility to ensure that any contribution we make as Member States respects the independence, mandate and technical authority of the IAEA.

In the context of naval nuclear propulsion, I recall the DG has specifically said that the IAEA has, and I quote:

- "significant experience in applying safeguards... to many types of facilities, including reactors using different types of fuel"; and
- "the necessary experience to develop the arrangements related to the use of nuclear material for naval nuclear propulsion in accordance with the Statute and the relevant safeguards agreements".

This is why Australia has expressed serious concern about references to 'an intergovernmental process', if it is intended to be a process subjecting the IAEA's technical work to the political deliberations of Member States.

And at the risk of stating the obvious – all Member States share an interest in protecting the IAEA's technical mandate, as we need to rely on its ability to carry out its mandate independently and impartially in these challenging times.

Please allow me to reiterate Australia's commitment in relation to our naval nuclear propulsion program.

We are committed to concluding an arrangement under Article 14 that will enable the IAEA to continue to fulfil its technical objectives at all stages of Australia's submarines' lifecycle, and to provide confidence to the international community on the non-diversion of nuclear material.

We remain concerned that a preoccupation with dictating a uniform, one-size-fits-all approach to implementing IAEA safeguards might hamper the IAEA's ability to meet its technical objectives.

In fact, given state-specific variations between naval nuclear propulsion programs, we strongly doubt that such an approach would even be feasible for enabling the IAEA to achieve all of its technical objectives.

When our Article 14 arrangement comes before the Board of Governors, in the fullness of time, we expect it to be judged on its non-proliferation merits. In other words, on whether it enables the IAEA to fulfil its technical objectives.

Despite the history of our program attracting exaggerated rhetoric, I hope I have given you a sense of the well established legal and policy framework through which we are engaging with the IAEA.

Working transparently and within the framework of our legal agreements is fundamental to the non-proliferation regime we are all committed to protecting here in Vienna.

Once again, I want to express our sincere appreciation for your continuing interest in this matter.

We are very conscious of that interest and we will continue to listen and engage.

We have appreciated expressions of support and confidence that we, AUKUS partners and the IAEA, will get this right.

I also thank you for your messages of appreciation for our efforts to keep you informed.

In accepting Ambassador Li's kind invitation, I was fully cognisant of my limited role in this forum, devised by another delegation, about my country's sovereign endeavour, and my country's bilateral engagement with the IAEA.

But in keeping with our spirit of openness – maybe even 'excessive' transparency – I decided to come and speak today.

We will continue to engage, regularly and transparently, with the IAEA and with the international community – here in Vienna and beyond.

We look forward to providing an update at the June Board and in other fora.

We continue to welcome constructive Board discussions on naval nuclear propulsion on the basis of reports by the DG.

We will continue to provide updates whenever there are substantive developments that fall within the Board's vital remit.

Thank you to Ambassador Li and to you all.

AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards

Workshop Organized by the Embassy of China 10 May 2024 Provided by Ms. Laura Rockwood

1. Compatibility of nuclear naval propulsion with the NPT and the Agency's Statute

<u>NPT</u>: Nuclear naval propulsion is not prohibited under the NPT. The negotiators explicitly debated the issue and decided NOT to prohibit the use of nuclear material for naval propulsion. Nor is the transfer of high enriched uranium prohibited under the NPT, regardless of its enrichment level. Indeed, HEU has regularly been supplied as fuel for research reactors.

IAEA Statute: Art. II of the Agency's Statute provides that the Agency "shall <u>ensure</u>, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose". The implementation of safeguards does not constitute "assistance" as contemplated under the Agency's Statute. As confirmed in a legal opinion issued during the negotiation of INFCIRC/153¹, the assistance referred to in Article II relates to Agency projects (that is, when materials or other items are made available to a State by the Agency).

Not only is the conclusion of a paragraph 14 arrangement not prohibited by the NPT or the Agency's Statute, such an arrangement is a *sine qua non* for such use: its conclusion is <u>required</u> before a NNWS is permitted to use nuclear material that would otherwise be subject to safeguards in a non-prohibited military nuclear activity.

2. Negotiation history highlights

All comprehensive safeguards agreements concluded by the IAEA are based on INFCIRC/153 (Corr.), negotiated by an open-ended committee of the Board of Governors (Committee 22). Paragraph 14 of INFCIRC/153 was included by the negotiators to ensure that the exclusion from safeguards of nuclear material for such a military use would not serve as a loophole for the diversion of nuclear material to a weapons programme. It is reflected in almost all CSAs concluded by the IAEA, with the paragraph numbers in INFCIRC/153 corresponding, by and large, to article numbers in the actual CSAs.

- <u>Australia</u>: The corresponding provision in Australia's CSA is Article 14.
- <u>Brazil</u>'s CSA differs somewhat in that regard, not just insofar as the corresponding provision is found in Article 13:
 - In July 1991, before either Brazil or Argentina became parties to the NPT or the Tlatelolco Treaty, the States concluded a bilateral agreement in which they undertook to use their nuclear material and facilities "exclusively for peaceful purposes". In that text, they also agreed that the use of nuclear energy for the propulsion of any type of vehicle, including submarines, was permitted under their bilateral Agreement, "<u>since propulsion is a peaceful application of nuclear energy</u>."²

¹ COM.22/4.

² INFCIRC/395, Article III.

- Subsequently, the Agency negotiated a CSA with Argentina, Brazil and ABACC (their bilateral inspectorate) the Quadripartite Agreement (INFCIRC/435). While the text was based on 153, Article 13 refers to "special procedures", rather than the "non-application of SG", to reflect: (1) the States' commitment to accept safeguards on *all* nuclear material in *all* nuclear activities; and (2) their interpretation that, while the use of nuclear material for naval propulsion may be military, it was not "non-peaceful."
- In addition, unlike other CSAs, Article 13 of the Quadripartite Agreement refers explicitly to the application of special procedures to "nuclear propulsion or operation of any vehicle, including submarines and prototypes, or in such other non-proscribed nuclear activity as agreed between the State Party and the Agency".
- In the late 1980's, <u>Canada</u> initiated negotiations on a para. 14 arrangement in connection with its plans to acquire nuclear powered submarines. Although Canada and the Secretariat held extensive discussions, Canada decided in 1989 not to pursue the initiative and no arrangement was concluded between the IAEA and Canada.
- Australia and Brazil are the only countries since then to have initiated negotiations on a paragraph 14 arrangement. Although Iran has also alluded to possible plans to pursue a submarine programme, it has not formally requested the IAEA to conclude such an arrangement.

3. Process

The IAEA has in the past employed a variety of mechanisms in developing procedures and guidance on safeguards-related matters, including:

- <u>Open-ended Committees of the Board of Governors</u>: Committees 22 and 24 on the negotiation of 153 and 540, respectively, and Committee 25 established in 2005 to consider further strengthening safeguards. Committees 22 and 24 were as successful as Committee 25 was unsuccessful.
- Advisory groups appointed by the Director General, including the Standing Advisory Group on Safeguards Implementation (SAGSI).
- Technical working groups convened in collaboration with representatives of relevant States, such as the late 1990s Trilateral Initiative, in which Russia, the US and the IAEA jointly worked on procedures for the verification of fissile material released from weapons programmes.
- External initiatives of its Member States, such as the early 1980s Hexapartite Project, an initiative of the 6 technology holder States, in which the secretariates of the IAEA and Euratom participated, which developed the safeguards approach for commercial gas centrifuge enrichment facilities that has been used since then by the IAEA.
- And, most commonly, bilateral negotiations between the Secretariat and individual States, such as was the case with Canada in connection with its proposed para. 14 arrangement. This is also the approach taken in the negotiation of Subsidiary Arrangements.

So, as to an open-ended committee? While that approach has worked in some cases, it has not in others, with the results being highly dependent on the context and the political environment. Experience suggests that, when dealing with novel and complex technical issues, particularly in a politically volatile environment, there is merit to leaving their resolution to the technical experts.

As regards the role of the Board of Governors, para. 14 does not, on its face, require Board approval; nor does it not preclude it. Two proposals were considered during the negotiation of 153, one which would have required Board approval, and the other which would have required approval by the Director General. Both were rejected by the negotiators on the premise that the IAEA should not be in a position to exercise any policy judgement, or veto over, the non-explosive military nuclear activity or the use of nuclear material in that activity. Ultimately, the text agreed to simply called for conclusion of the arrangement "in agreement with the Agency".

As indicated by the then-Director General in the 1978 exchange of letters initiated by Australia,³ and reiterated by the current Director General, any such arrangement will be provided to the Board for "appropriate action". Ultimately, it is for the Board to decide on what the "appropriate action" may be.

4. The arrangement

The non-application of routine safeguards under a CSA can only be while the nuclear material is in the non-proscribed military nuclear activity, and safeguards are to be reapplied as soon as the nuclear material is reintroduced into a peaceful nuclear activity. While the drafters of INFCIRC/153 did not agree on a definition of either "peaceful" or "non-peaceful", they did agree that certain activities were not inherently military and therefore not entitled to exclusion, specifically:

- Activities such as transport and storage; and
- Activities or processes that merely change chemical or isotopic composition (e.g. enrichment and reprocessing).⁴

As Australia will not be engaged in enrichment or reprocessing of the reactor fuel, that could simplify the negotiation process. Brazil's nuclear naval programme poses perhaps a more challenging safeguards situation given that it has domestic enrichment capabilities.

Is it possible to apply some verification measures while a para. 14 arrangement is in place? Absolutely – if that were not the case, there would hardly have been a need for

³ GOV/INF/347, July 1978.

⁴ Para. 14 is often referred to as "withdrawal" of nuclear material from safeguards to distinguish it from provisions related to the termination of safeguards on nuclear material or the exemption of nuclear material from certain provisions under the agreement. However, the title of this provision – "non-application of safeguards" – was explicitly formulated by the negotiators to underscore that the IAEA "should be consulted and satisfactory administrative arrangements reached concerning the use of any nuclear material for a military purpose permitted under [the NPT], whether or not the material was initially under safeguards." It was explicitly stated that "The provision should thus be applied to all material which was either actually under safeguards and to be withdrawn or which had never been placed under safeguards and which was intended to be used in a permitted nuclear activity."

a paragraph 14. The arrangement is intended to build in guardrails to make sure the material and activities involved are not misused for prohibited purposes.

In this context, it is important to note that there is nothing in the Statute of the IAEA that limits the application of safeguards to peaceful nuclear activities.

A key question will be how to get safeguards as close as possible to the submarine reactor without access to classified information, minimizing the time during which the material will not be subject to routine verification under the CSA.

5. Safeguards conclusions

The language used by the IAEA to reflect its safeguards conclusions has evolved over the years. For States with a CSA and an AP, we currently have the possibility of what has come to be known as the broader conclusion, i.e. that all nuclear material of the State remains in peaceful activities.

The broader conclusion is premised on the Agency's ability to fufill its technical objectives of verifying that:

- There has been no diversion of declared nuclear material;
- There has been no misuse of declared nuclear facilities or LOFS (i.e. no undeclared production or processing of nuclear material at declared facilities or LOFs); and
- That there are no undeclared nuclear material or activities in the State as a whole.

The broader conclusion language is not carved in stone and could, as it has in the past, be further evolved. However, whatever the formulation, the conclusion must be drawn for the State as a whole, and not only for part of the State (a "qualified conclusion")

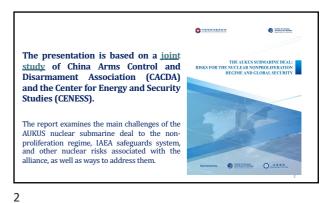
6. Final thoughts regarding the question of precedent

Any such arrangement may inevitably be invoked as a precedent for other States. However, each arrangement will have to be tailored to the specific circumstances of the State concerned.

In that context, it could prove useful for any such arrangement to articulate the premises on which it is being concluded (e.g. that State is a NNWS party to a CSA and an AP; the State has/does not currently have indigenous reprocessing or enrichment capabilities) and whatever other parameters were taken into account in determining that the applicable verification measures will contribute to the IAEA's ability to draw credible conclusion about the non-diversion of nuclear material used in such activities.

Whatever the arrangement ultimately concluded, it must be designed as fit for purpose, regardless of who the partner States might be.





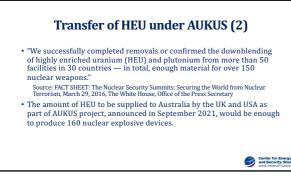
AUKUS Nuclear Submarine Deal • The USA and the UK (NWSs) embarked on unprecedented nuclear submarine cooperation with Australia (NNWS). • In practical terms, the US and UK will assist Australia in establishing fleet of 8 nuclear-powered submarines in total Australia's Acquisition of the SSNs in the Context of AUKUS Deal Type of Submarine Ouantity Delivery Supplier U.S. Virginia 3-5 Early 2030s The US SSN-AUKUS 5-3 Early 2040s Australia* Center for Energy and Security Stu

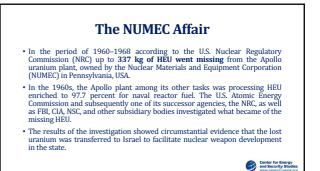
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- According to the information available, each U.S. Virginia-class submarine and UK Astute-class submarine contains about 500kg of highly enriched uranium (HEU) at weapons-grade enrichment 93–97% U-235.
- That means the nuclear fuel of Australia submarines will contain about 4 tons of HEU.
- It is intended that safeguards will not be applied to this amount of nuclear material for a lengthy period of time, which makes this issue unprecedented, including with regard to the future arrangement under the Article 14 of CSA.
- There are some precedents that need to be factored in the risk assessment since diversion of significant amounts of HEU happened in the past.

4







Challenges to IAEA Safeguards System

- According to Article 14 of the Comprehensive Safeguards Agreement between Australia and the IAEA (INFCIRC/217), safeguards will not be applied to HEU while it is used in non-proscribed military activity in nuclear submarines.
- It is going to be <u>the first case of practical implementation of Article 14</u> provisions. There are a lot of unanswered questions in relation to interpretation and implementation of the Article 14, such as *legal basis*, concrete procedure, technical feasibility, etc.
- In accordance with existing practice, the IAEA Member States should take part in the development of arrangements on conceptual issues related safeguards, that includes arrangements necessary under the Article 14 of CSA.

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7



AUKUS: Need for Transparency and Inclusive Dialogue

- The AUKUS partners expressed their commitment to adhere to "the highest standards" for international transparency in joint statements on multiple occasions. The transition from AUKUS partners statements to their actions is required.
- The information on the nuclear submarine project is provided in a very limited form to other members of the Agency, the AUKUS states avoid inclusive engagement on the subject at the governmental level and with NGOs.
- For example, the AUKUS states didn't participate in-person or online in the sessions on the topic of AUKUS and the NPT as part of the Moscow Nonproliferation Conference (MNC), organized by CENESS in December 2022 and April 2024.

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Last, but not least...

- In March 2023, IAEA DG Rafael Grossi indicated the "the serious legal and complex technical matters" in relation to the process required under Article 14 of Australia's CSA. He noted that once the arrangement is finalized, it will be transmitted to the IAEA Board of Governors "for appropriate action".
- The IAEA Board of Governors repeatedly decided by consensus to set up a formal agenda item to discuss "transfer of nuclear materials in the context of AUKUS and its safeguards in all aspects under the NPT".
- In accordance with existing practice, the arrangements on conceptual issues related to safeguards, which includes arrangement under Article 14 of CSA, should be submitted to the Board of Governors for approval.

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10

Workshop on AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards

IAEA-VIC Conference Room CR-1 10 May 2024

Comments by Tariq Rauf¹

To begin with, I would like to extend my thanks and appreciation to Ambassador Li Song, Permanent Representative of the People's Republic of China to the Agency, for convening this open discussion on a matter which if not addressed in an open, transparent and inclusive manner could possibly have a deleterious impact on the integrity and authority of the Agency's safeguards system anchored in INFCIRCs 153 and 540 – the comprehensive safeguards agreement and the model additional protocol.

In this regard, I welcome and commend the presence and statement of Ambassador Ian Biggs, Permanent Representative of Australia to the IAEA, and a former colleague in the IAEA Secretariat, which is in keeping with the statement in the Board on 8 March 2024 to "address genuine questions from interested delegations" as well as with the AUKUS States statement of 6 March to "continue to engage in good faith with member states on genuine questions, consistent with [the] approach to maintaining open and transparent engagement". I very much hope that such engagement shall continue in an open and transparent manner.

In addition, I also commend the presence and comments of Mr Ionut Suseanu, Head of the Section on Non-Proliferation and Policy Making Organs, Office of Legal Affairs of the IAEA. The involvement of the IAEA Secretariat in workshops such as this one is an indication of transparency and should be appreciated and encouraged by Member States. Furthermore, I have full confidence in and support the efforts of the Director General and IAEA Secretariat Staff in upholding the authority, integrity, independence and professionalism of the Agency in fulfilling its Statutory and international legal obligations while rejecting any undue influence from external sources.

I should like to emphasize that I have full confidence in the integrity of those non-nuclearweapon States party to the Non-Proliferation Treaty and their stated intentions to fully honour and implement the obligations under their respective safeguards agreements in connection with the NPT and relevant nuclear-weapon-free zone treaties, in their efforts to indigenously develop and/or acquire conventionally armed nuclear powered submarines.

¹ Tariq Rauf is former Head of Verification and Security Policy, Office reporting to the Director General, IAEA (2002-2011) – all comments in personal capacity. <u>tariqrauf@icloud.com</u>

It should be understood that my commentary and questions on various aspects of the IAEA's activities concerning nuclear safeguards, safety and security activities, as a former IAEA official, is motivated by supporting the organization's efforts and to suggest information, ways and modalities to further enhance the IAEA's performance on contentious and complex matters, as well as to expose undue pressures on the Secretariat from various external sources. The external pressures and politicization introduced into the IAEA's work by certain external sources is reprehensible and must be exposed and countered.

I would like to focus my comments today on the matter of "Non-Application of Safeguards to Nuclear Material to be Used In Non-Peaceful Activities", as provided for in IAEA document INFCIRC/153 (Corrected) of June 1972 on *The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons* (NPT). INFCIRC/153 serves as the template for the comprehensive safeguards agreements (CSA) in connection with the NPT (IAEA INFCIRC/140 of 22 April 1970).

Agency safeguards conclusions are based on evidentiary criteria and thus any arrangement or procedure for the non-application of safeguards to non-proscribed military activities must not only be transparent but also accountable to the Agency to other States with CSAs in force – this cannot and must not be done behind a veil of secrecy and must be based on credible technical criteria.

Non-Proliferation Treaty

To recall, ARTICLE III.1 of the NPT *inter alia* stipulates that:

Each Non-nuclear-weapon State Party to the Treaty undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency in accordance with the **Statute** of the International Atomic Energy Agency and the **Agency's safeguards system**, for the **exclusive purpose of verification** of the fulfilment of its obligations assumed under this Treaty with a view to **preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices**. Procedures for the safeguards required by this Article shall be followed with respect to source or special fissionable material whether it is being produced, processed, or used in any principal nuclear facility or is outside any such facility. **The safeguards required by this Article shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere**

INFCIRC/153

Accordingly, INFCIRC/153, the CSA template, stipulates in its **Paragraph 1**, the **Basic Undertaking**:

The Agreement should contain, in accordance with Article III. 1 of the Treaty on the Non-Proliferation of Nuclear Weapons1), an **undertaking by the State to accept safeguards, in accordance with the terms of the Agreement, on all source or special fissionable material in all peaceful nuclear activities within its territory, under its jurisdiction or carried out under its control any where, for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices.**

And, INFCIRC/153, the CSA template, stipulates in its **Paragraph 2**, **Application of Safeguards**:

The Agreement should provide for the **Agency's right and obligation to ensure that safeguards will be applied**, in accordance with the terms of the Agreement, **on all source or special fissionable material in all peaceful nuclear activities** within the territory of the State, under its jurisdiction or carried out under its control anywhere, for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices.

But then, INFCIRC/153, the CSA template, stipulates in its **Paragraph 14, Non-Application of Safeguards to Nuclear Material to be Used In Non-Peaceful Activities**:

The Agreement should provide that if the **State intends to exercise its discretion to use nuclear material which is required to be safeguarded thereunder in a nuclear activity which does not require the application of safeguards under the Agreement**, the following procedures will apply:

- (a) The State shall inform the Agency of the activity, making it clear:
 - (i) That the use of the nuclear material in a non-proscribed military activity will not be in conflict with an undertaking the State may have given and in respect of which Agency safeguards apply, that the nuclear material will be used only in a peaceful nuclear activity; and
 - (ii) That during the period of non-application of safeguards the nuclear material will not be used for the production of nuclear weapons or other nuclear explosive devices;
- (b) The **Agency and the State shall make an arrangement** so that, only while the nuclear material is in such an activity, the **safeguards provided for in the**

Agreement will not be applied. The arrangement shall *identify, to the extent possible*, the period or circumstances during which safeguards will not be applied. In any event, the safeguards provided for in the Agreement shall again apply as soon as the nuclear material is reintroduced into a peaceful nuclear activity. The Agency shall be kept informed of the total quantity and composition of such unsafeguarded nuclear material in the State and of any exports of such material; and

(c) Each arrangement shall be made in agreement with the Agency. The Agency's agreement shall be given as promptly as possible; it shall only relate to die temporal and procedural provisions, reporting arrangements, etc., but shall not involve any approval or classified knowledge of the military activity or relate to the use of the nuclear material therein.

Paragraph 14 of INFCIRC/153

With the prospects looming of the implementation of Paragraph 14 of INFCIRC/153, for the first time since 1987, many policy and technical questions arise from the poor drafting of this paragraph, and its lack of definitional clarity as regards the meaning and scope of application of key elements.

The negotiating record that I was able to access in the Agency's Archives does not provide clarity, definitions or broader context and concepts underlying the necessity for the non-application of safeguards on the use of nuclear material in a non-proscribed military activity. I am given to understand that more detailed records, including the statements and position papers of the negotiating States are in the custody of the IAEA Department of Safeguards but these are <u>not</u> available to Member States and to the public for examination and assessment.

- May I hereby kindly request the representative of the Secretariat present here today, from the Office of Legal Affairs, to inform us during this discussion on the matter of public access to the full and complete negotiating record and documentation related to INFCIRC/153, in particular to its Paragraph 14; as well as that related to INFCIRC/435² (the Quadripartite Agreement).
- And, may I further to request the organizers of this discussion and indeed all IAEA Member States to formally request the Secretariat to make available on the Agency's website without exception the full unredacted negotiating record and documentation held by the Secretariat whether in the Agency's Archives, the Department of Safeguards, the Secretariat of the Policy Making Organs, or in any

² The Agreement (and the Protocol thereto) between the Republic of Argentina, the Federative Republic of Brazil, the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials and the International Atomic Energy Agency for the Application of Safeguards, <u>INFCIRC/435</u>, March 1994.

other location. If doing so requires instituting any changes in the Agency's confidentiality policy, or safeguards confidentiality policy, to fully and entirely derestrict the full extent of the negotiating record of INFCIRC/153, then the required changes must be instituted as a matter of priority.

In this regard, in the interest of transparency and the strengthening of application of safeguards, all concerned Member States must formally convey to the Director General their full consent to de-restrict in unredacted form any and all documents, statements, working papers etc. submitted by them during the negotiations on INFCIRC/153 and INFCIRC/435, and further to make it available on the Agency's website.

With respect to paragraph 14 provisions, it is essential that the Secretariat:

- issue a generic technical report on the modalities and procedures, safeguards criteria and objectives;
- issue a generic legal assessment on safeguards conclusions;
- set up an open-ended working group or consultations mechanism; and
- > provide regular detailed briefings to Member States and to interested experts.

Aurora Papers No. 8 (1988)

Since the first public discussion was held in November 2021 on the matter of the nonapplication of safeguards on nuclear material to be used in non-proscribed military activities³, I have written quite extensively on the matter and also made available on the internet to first comprehensive examination of the meaning and implications of Paragraph 14 of INFCIRC/153 that was done by my then-colleague at the Canadian Centre for Arms Control and Disarmament, Marie-France Desjardins and I, published as Aurora Papers No. 8 in 1988 under the title, *Opening Pandora's Box: Nuclear-Powered Submarines and the Spread of Nuclear Weapons*⁴.

In preparing our study we consulted at the time and benefitted from the views and inputs of, among others:

David Fischer, former Assistant Director-General for External Relations at the IAEA; **Benjamin Sanders**, Secretary-General of the Third NPT Review Conference and formerly with the safeguards department at the IAEA who was closely involved from the Secretariat in the negotiation of INFCIRC/153; **Myron Kratzer** of the US

³ Australia's Nuclear-Powered Submarines Will Risk Opening a Pandora's Box of Proliferation (19 September 2021); <u>Nuclear Submarines: Who Will Get Them Next?</u> ((24 November 2021); Policy Brief No.122: <u>Crashing Nuclear Submarines Through IAEA Safeguards</u> (January 2022); <u>Nuclear Submarines and</u> <u>The Non-Proliferation Treaty: Brazil Gets a Jump on Australia?</u> (8 August 2022), <u>IAEA Safeguards and Naval</u> <u>Nuclear Propulsion</u> (10 November 2022).

⁴ Canadian Centre for Arms Control and Disarmament, <u>Aurora Papers No. 8</u>, Marie-France Desjardins and Tariq Rauf: Opening Pandora's Box: Nuclear-Powered Submarines and the Spread of Nuclear Weapons, (Ottawa, February 1988, Updated June 1988).

INFCIRC/1213

Atomic Energy Commission and US State Department, who represented the US at the INFCIRC/153 negotiations; **Frank Houk and Richard Hooper** both of the US State Department, Hooper later was Director of the Division of Concepts and Planning in the IAEA Department of Safeguards – both Richard Hooper and Frank Houck were the "technical brains" behind the model additional protocol INFCIRC/540; **Charles van Doren**, former Assistant Director of the US arms control and disarmament agency and head of its (nuclear) Non-Proliferation Bureau; **Jon Jennekens**, DDG Safeguards at the Agency; and **Christopher Herzig**, Director, Division of External Relations at the Agency; as well as senior officials from the nuclear division of Canada's Department of External Affairs and the Atomic Energy Control Board of Canada.

Why this name-dropping – only to reinforce that my 1988 study was based on solid information and analysis. I would recommend that Member States consider having this study made available as an IAEA INFCIRC to serve as a background reference.

Also, I would like to remind Member States about <u>INFCIRC/1091</u> of 1 June 2023 that contains a summary and the proceedings of a workshop on "The AUKUS and Article 14: Challenges Ahead, organized by the Permanent Mission of China on 18 May 2023⁵, here at the VIC.

In Aurora Papers 8, it is noted that as early as the Conference on the IAEA Statute in 1956, questions were raised concerning the Agency's role in relation to such an application of nuclear energy. Although it is not clear if the intention at that time was for non-nuclear-weapon States to use nuclear ship propulsion for military purposes, it is worth noting that the issue was brought up in connection with definitional problems concerning the Statute.

Indeed, concerned that the proposed Statute included no definition of the terms "peaceful" and "military", two States, France and India, proposed amendments in this regard. As Paul C. Szasz noted: "After a brief debate, in which the principal sponsors recorded their understanding that the Agency would not be precluded from concerning itself with the nuclear propulsion of civilian ships and vehicles even though similar propulsion units might be used for military transport, both proposals were withdrawn".

It is difficult to speculate on the reasons why France and India, both known as strong opponents of safeguards, would have been interested in clarifying the Agency's responsibilities in this matter. It is worth noting, however, that at the time of the negotiations on the Statute, studies on the efficiency of naval nuclear reactors were well underway. At the time of the Conference on the Statute, a US nuclear-powered

⁵ Proceedings of a workshop on "<u>The AUKUS and Article 14: Challenges Ahead, organized by the Permanent</u> <u>Mission of China</u>," on 18 May 2023, IAEA INFCIRC/1091 (1 June 2023); see also "<u>Different Views some IAEA</u> <u>Member States regarding the IAEA</u> <u>Director General's Statement on Naval Nuclear Propulsion (2023/Note</u> <u>44</u>)", IAEA INFCIRC/1130 (12 September 2023).

submarine, the *Nautilus*, had already been operationally deployed for two years, and another such boat was being built. In this context, it is plausible that during the negotiations on the Statute, developing countries such as India, perceiving that they were already being discriminated against under the proposed Statute in terms of the application of safeguards, wanted to secure as many compensating benefits as possible.

Considering that nuclear ship propulsion could have both military and civilian applications, it was not at all certain that the Agency could be in a position to render assistance to States with respect to this (new) application of nuclear energy. In any case, this episode illustrated that the nuclear ship propulsion option was a matter of concern, even before the implementation of the NPT, and that some States were opposed to having it reserved exclusively for the superpowers.

IAEA Safeguards Committee (1970)

When the IAEA Safeguards Committee met in 1970 to advise the Agency's Board of Governors on the content of a safeguards agreement necessary to meet the obligations of the NPT, it was not in a position to challenge the Treaty calling for the application of safeguards only on nuclear materials in peaceful activities in non-nuclear weapon States and implicitly exempting from safeguards all nuclear materials used in non-proscribed military activities. The historical reason was an interest in naval nuclear propulsion among some non-nuclear-weapon States (Italy and the Netherlands) at the time the NPT was negotiated. The Director General had drawn the attention of the Safeguards Committee (1970) to the problem. The Secretariat had done its best to block the loophole by proposing several conditions to the Committee (which it accepted and incorporated into INFCIRC/153) that the State concerned would have to comply with before withdrawing nuclear material from safeguards for non-explosive military use – as stipulated in Paragraph 14, INFCIRC/153.

INFCIRC/153 and the NPT

In my presentation in November 2021, I had noted that the 1975, 1985, 1995 NPT Review Conferences' Final Declarations made no reference to INFCIRC/153. It is surprising that NPT States parties never formally reviewed or approved INFCIRC/153 as fulfilling the requirements of NPT. Article III.1. The first reference came only at the 2000 NPT Review Conference. Even though Canada had announced a programme of acquisition of nuclear-powered submarines in 1987 and had approached the Agency on Paragraph 14, the 1990 NPT review conference unfortunately did not take up the matter of non-application of safeguards on non-proscribed military activities. The draft President's final document at the 2022 NPT Review Conference did not address this matter and, in the

meagre five-line paragraph 36, only called for transparent and open dialogue on this topic.

Fifty-two years after Paragraph 14, INFCIRC/153, was adopted – a question to NPT States parties – should the Director General be requested to submit a detailed technical report to the 11th NPT Review Conference (2026) on the implications for the CSA and the additional protocol of the implementation of Paragraph 14 of INFCIRC/153? This to enable the NPT Review Conference to reconsider the matter of the "Non-Application of Safeguards to Nuclear Material to be Used In Non-Peaceful Activities" and to decide whether this option should still be made available or that it is to be rescinded and recommend accordingly to the IAEA Board of Governors?

Questions regarding Paragraph 14, INFCIRC/153

Until now the scope, definitions and implementation of Paragraph 14 of INFCIRC/153 remain untested and have not been brought before the IAEA Board of Governors for their review, assessment and for approval or for "appropriate action".

Indeed, in GOV/INF/347 (3 July 1978), the-then IAEA Director General stated that, "No State Party to NPT has so far exercised the discretion referred to in paragraph 14. Accordingly, the Board of Governors has not had occasion to interpret that paragraph, nor has it elaborated in further detail the procedures to be followed pursuant to that paragraph" [emphasis added].

In connection with Canada's stated intention in 1987 to acquire a fleet of conventionallyarmed nuclear-powered submarines, in response to my enquiry, the-then IAEA Director of External Relations essentially confirmed the Secretariat's views expressed in GOV/INF/347, in its letter dated 20 August 1987 (reproduced in the Annex to this paper). The Agency stated in its communication that, "<u>To the Secretariat's knowledge there is no</u> formal definition of "non-proscribed military activity". We understand that at the time of preparing INFCIRC/153 naval propulsion was commonly considered the most likely use. We also understand that most, if not all, participants in the Committee which prepared INFCIRC/153 favoured a narrow construction of the term "non-proscribed military activity", and that processes such as enrichment or reprocessing to produce materials for use in such an activity would not themselves be considered as non-proscribed military uses and would therefore be subject to safeguards in the NNWS concerned" [emphasis added].

However, on 7 June 2023, the IAEA Director General in his statement to the Board of Governors on "Naval Nuclear Propulsion" stated that, "... as a general matter, to the issue of interpretation, there are specific provisions on the interpretation and application of the CSA in paragraphs 20 and 21 of INFCIRC/153. Paragraph 20 provides that the State party to the CSA and the Agency "shall, at the request of either, consult about any question

arising out of the interpretation or application of [the CSA]", including paragraph 14. Pursuant to paragraph 21, <u>the State party to the CSA has the right to request that "any</u> <u>question arising out of the interpretation or application of [its CSA] be considered by the</u> <u>Board</u>". So interpretation where it is a matter between the State party concerned and the <u>Secretariat</u>, this is according to the existing legal framework, I repeat, which is the only one I can apply" (IAEA: 2023/Note44, 7 June 2023) [emphasis added].

Thus, there now exists some uncertainty regarding the matter of interpretation of the provisions of INFCIRC/153 as expressed by responsible senior IAEA officials in 1978, 1987 and 2023; and in an IAEA safeguards reference document discussed below.

Part II of INFCIRC/153, paragraphs 36-38 on "Exemptions from safeguards", and paragraphs 98-116 on "Definitions", respectively do not address any of the terms or concepts in paragraph 14. Furthermore, the 182 CSAs in force today while they all include paragraph 14, the Board has never had the opportunity to assess the implications for the Agency's safeguards system, nor developed a common understanding on, the implementation of paragraph 14.

Paragraph 14 (a), INFCIRC/153, stipulates, "(i) That the <u>use of the nuclear material in a</u> <u>non-proscribed military activity</u> will not be in conflict with an undertaking the State may have given and in respect of which Agency safeguards apply, that <u>the nuclear material</u> <u>will be used only in a peaceful nuclear activity</u>" [emphasis added].

However, in the "<u>Guidance for States Implementing Comprehensive Safeguards</u> <u>Agreements and Additional Protocols</u>", IAEA Services Series 21 (May 2016)⁶, which is "principally intended for State and regional authorities responsible for safeguards implementation ... [and] is a reference document", it is claimed in "Section 7.6. Nonapplication of safeguards to nuclear material to be used in non-peaceful Activities: <u>CSAs</u> <u>allow for the possibility that a State may wish to use nuclear material in a non-peaceful, but not prohibited, nuclear activity</u>" [emphasis added].

Could the Secretariat clarify its understanding of paragraph 14 (a)(i) of INFCIRC/153 that stipulates that nuclear material under non-application of safeguards "will be used only in a <u>peaceful nuclear activity</u>" and explain why its reference document on CSAs implementation states that CSAs allow for the possibility that a State may wish to use nuclear material in a <u>non-peaceful</u> nuclear activity?

⁶ IAEA, "Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols", <u>IAEA Services Series 21</u> (May 2016). The Foreword clearly states that, "<u>This Guidance is principally intended for State and regional authorities responsible for safeguards implementation</u>, as well as for facility operators. <u>This Guidance is a reference document</u> that will be supported by detailed guidance and examples in Safeguards Implementation Practices Guides to be published separately [emphasis added].

While uranium enrichment facilities in non-nuclear-weapon States would remain under safeguards, questions arise with respect to paragraph 14 (b) regarding information to be provided by the State to the Agency on the total quantity and composition of nuclear material not subject to safeguards for use in naval nuclear fuel:

- How would "a non-proscribed military activity" be defined, and by whom?
- Would IAEA Member States be expected to accept the definition of "a nonproscribed military activity" as formulated between a State and the Agency, or would or should Member States have a role in formulating the definition?
- How would the IAEA verify the correctness and completeness of the declaration by the State on the total quantity and isotopic composition of the nuclear material not under safeguards in use in a non-proscribed military activity?
- How would the IAEA determine the credibility and accuracy of "classified knowledge of the military activity" and to "the use of the nuclear material therein"?
- Would the IAEA have access for design information verification (DIV) for naval nuclear reactors?

Paragraph 14 (c), INFCIRC/153, stipulates that "Each arrangement [for the non-application of safeguards on non-proscribed military activities] shall be made in agreement with the Agency", the questions arise:

- What is the definition of the Agency: is it the Member States, the Director General, the Secretariat; or is the Agency the collectivity of the Member States along with the Director General, and the Secretariat? Or is the Agency its policy making organs (General Conference and Board of Governors) and the Secretariat?
- If the Agency is the collectivity and the arrangement for the non-application of safeguards on non-proscribed military activities requires the agreement of the Agency, then what is the role of Member States, the Director General, and the Secretariat in the designing of the arrangement?

Paragraph 14 (c), INFCIRC/153, refers to "reporting arrangements", question in this regard:

What would be the scope and content of the reporting arrangements for the nonapplication of safeguards on non-proscribed military activities? Paragraph 14 (c), INFCIRC/153, refers to "reporting arrangements" that "shall not involve any approval or classified knowledge of the military activity or relate to the use of the nuclear material therein":

- Who would decide what is deemed classified knowledge of the military criteria, and based on what criteria?
- Does Paragraph 14 (c) reference that the reporting arrangements shall <u>not</u> involve any approval or classified knowledge of the use of nuclear material in the military activity requiring non-application of safeguards – i.e., that the State is under <u>no</u> obligation to inform the Agency of the claimed nuclear activity (whether naval nuclear propulsion or other)?

On <u>6 March 2024</u>, the "AUKUS statement to the IAEA Board of Governors" on "Nuclear safeguards", *inter alia* noted that:

- the Agency already has "the necessary experience to develop the arrangements related to the use of nuclear material for naval nuclear propulsion in accordance with the Statute and relevant safeguards agreements".
- Could the AUKUS partners or the IAEA Secretariat provide the information and details regarding the Agency's experience to develop the arrangements related to the use of nuclear material for naval nuclear propulsion in accordance with the Statute and relevant safeguards agreements?

On <u>8 March 2024</u>, the "AUKUS update to IAEA Board of Governors" on "Australia's naval nuclear propulsion", inter alia noted that:

- Australia's Paragraph 14 arrangement will not remove nuclear material from IAEA oversight: the Agency will continue to fulfil its technical objectives at all stages of Australia's nuclear-powered submarine program – verifying no diversion of nuclear material; no misuse of nuclear facilities; and no undeclared nuclear material or activities in Australia;
- We will continue to provide updates on developments relating to Australia's naval nuclear propulsion programme, and to address genuine questions from interested delegations regarding our non-proliferation approach through this and other fora, as appropriate.
- Could the IAEA Secretariat elaborate on the technical objectives of non-diversion, no misuse of nuclear facilities, no undeclared nuclear material or activities, in connection with the non-application of safeguards to non-proscribed military activities – stated to be nuclear-powered submarines?

Could the IAEA Secretariat make available the elements of the "conceptual proposal on safeguards measures to be considered as part of the discussions on the arrangement under Special Procedures in relation to Paragraph 13 of [INFCIRC/435]", so that Member States may assess the proposed safeguards measures in terms of their relevance to Paragraph 14 of INFCIRC/153?⁷

Paragraph 14 (c), INFCIRC/153, also refers to "The Agency's agreement" not requiring "any approval or classified knowledge of the military activity or relate to the use of the nuclear material therein":

How is this stipulation to be interpreted – that the Agency would not be provided information on the <u>use</u> of the nuclear material in non-proscribed military activities subject to non-application of safeguards?

While uranium enrichment facilities in non-nuclear-weapon States would remain under safeguards, even if providing nuclear material to non-proscribed military activities, possible diversion scenarios could include:

- diversion of enriched uranium from the enrichment facility;
- diversion of stockpiled enriched uranium intended for naval fuel fabrication;
- diversion of nuclear fuel from the submarine construction or servicing facility; and
- establishment of an undeclared enrichment plant.
- What diversion path analysis would the Agency conduct, what information and data would be utilized?
- Would environmental sampling be carried out at the enrichment facility, nuclear fuel fabrication facility, naval nuclear propulsion reactor, naval construction and base facilities, and naval spent fuel storage?
- What are the implications for the State Level Approach (SLA) for a State pursuing naval nuclear propulsion?

Safeguards Challenges and Measures

If international monitoring of naval HEU stocks were agreed, when HEU was required to fabricate new naval-reactor cores, a State would have to declare to the IAEA the amount of HEU that it required for the purpose. This would require States to be willing to declare to the IAEA the quantities of HEU in specific cores. Although some States currently classify this information, revealing it would not appear to reveal sensitive performance characteristics, such as the maximum power output of the core or how rapidly the power

⁷ GOV/INF/2023/11 (31 May 2023), paragraph 8.

output can change or how resistant the core would be to damage resulting from the explosions of nearby torpedoes or depth charges.

The verification challenge, which has not been completely worked out yet, would be to be able to determine non-intrusively that the fabricated "cores" contained the agreed amount of HEU and that the objects designated as "cores" were installed and sealed into naval reactor pressure vessels.

Some information crucial for uranium accounting need not be classified. For example, while the uranium inventory and the enrichment level of a fresh core can give an idea of the maximum lifetime a reactor can achieve before refueling, it gives little indication of the actual tactical performance of the submarine propulsion system.

HEU in naval use potentially could be verified through use of passive and active nondestructive assay techniques involving gamma spectroscopy and neutron counting to verify the presence of highly enriched uranium but also the mass, isotopic content and geometry of the fissile material. This would be dependent upon development of appropriate information barrier technologies to prevent release of proliferation sensitive information whilst allowing inspectors access to sufficient information for verification purposes.

Inspectors would need to be able to verify receipt of fresh fuel assemblies and monitor fuel elements placed in storage pending the loading of fuel into a reactor. The guarantee of non-diversion of fissile materials would mostly rely on cask sealing and tagging as well as random assaying of stored casks. Cameras could record the activity within the building as a complementary measure. Inspectors then would need to verify the assembly of the reactor core and the installation of the core into the submarine's reactor pressure vessel. Once fuel has been loaded the HEU is beyond the reach of inspectors. Nevertheless, periodic measurements of radiation within or external to docked naval vessels as reactor power levels are varied would provide further assurance that the HEU remains committed to the declared NNPP.

When the submarines are defueled, spent fuel will need to be accounted for. Individual nuclear fuel elements could be transferred to shielded transport containers that could be tagged and sealed before transfer to a monitored spent fuel area. The inspectors could seal every spent fuel cask. Before doing so a neutron and/or gamma profiling of randomly selected fuel elements could be made using a cask radiation profiling system. This would allow re-verifying the content of the casks at a later stage by comparing new radiation profiles to the baseline fingerprints.' Inspectors could then externally verify the absence of irradiated fuel within the submarine's pressure vessel with gamma detectors.

Safeguards Conclusions and Nuclear-Powered Submarines

For "drawing safeguards conclusions", the Agency specifies that, "For States with a Comprehensive Safeguards Agreement (CSA) and an Additional Protocol in force [such as, for example, Australia]: If the IAEA's Secretariat has completed all evaluations and found no indication of the diversion of declared nuclear material from peaceful activities and no indication of undeclared nuclear material or activities for the State as a whole, the Secretariat concludes that all nuclear material remained in peaceful nuclear activities".

Without getting into an unnecessary "legal discussion" in light of the above, in my view, were Australia or Brazil or any other NPT NNWS to withhold from the IAEA information regarding safeguards application on naval nuclear fuel, then they should <u>not</u> be able to qualify for the IAEA's safeguards conclusions of: (a) "no indication of the diversion of declared nuclear material from peaceful nuclear activities; and, (b) no indication of undeclared nuclear material or activities. Thus, the IAEA Secretariat would not be able to conclude that, [for Australia / Brazil], "all nuclear material remained in peaceful activities".

If NPT non-nuclear-weapon States really would like to set a good precedent, the only truly responsible way would be to agree to place viable Agency safeguards on nuclear-powered submarine programmes with the direct involvement and participation of the IAEA. Such States should ask and assist the IAEA to devise a safeguards concept, a safeguards approach, safeguards technical measures to apply credible safeguards to naval nuclear fuel and naval nuclear ship propulsion reactors in NPT non-nuclear-weapon States – this could be done without access to armaments and other parts of the submarine.

***** END *****

ANNEX

CIRC 341.67(71) D47 Opening Pandora's Box? Nuclear-Powered Submarines and the Spread of Nuclear Weapons

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AURORA PAPERS 8



Marie-France Desjardins Tariq Rauf

THE CANADIAN CENTRE FOR ARMS CONTROL AND DISARMAMENT

Appendix V



INTERNATIONAL ATOMIC ENERGY AGENCY AGENCE INTERNATIONALE DE L'ENERGIE ATOMIQUE MEMILYITAPOILIOE AFEHTCTBO ПО ATOMIOĂ JHEFI NU ORGANISMO INTERNACIONAL DE ENERGIA ATOMICA

WAGRAMURSTRASSI: S. P.D. BOX 100, A-1400 VIENNA, AUSTRIA TELEX: 1-12645, CABLE: INATOM VIENNA, FACSIMUE: 43 222 230184, TELEPHONE: (222) 2360

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COMPOSER TARTS IN MENT THE STATE STORES

20 August 1987

Dear Mr. Rauf,

Ξ.

I refer to the letters which you and Mr. Designding have addressed to several staff members of the International Atomic Energy Agency concerning your Centre's research project on nuclear non-proliferation. A number of the questions you have asked involve matters of judgement about the Non-Proliferation Treaty and the policy of the Canadian Government in relation to the Treaty. It would not be proper for individual staff members of the Agency to make comments or judgements in such political or policy areas, which could be interpreted as reflecting the view of the Agency and its Secretariat as a whole. Nor is it proper for the Agency itself to take a position on legitimate national policy debates.

I would suggest that the most comprehensive source of information on several of the questions you have asked is the records of the discussions of the Committee set up by the Agency's Board of Governors in 1970 with the task of formulating the document which eventually was published as INFCIRC/153 (corrected). This Committee was open to all Member States. The Secretariat of the Committee was provided by staff members of the Agency. If you have not done so already, you will no doubt be approaching the Canadian Government and requesting access to these records.

Hy colleagues will not be replying individually to the letters you have addressed to them. However, the following comments may be helpful to you in carrying forward your project. They reflect the Secretariat's understanding of the background to paragraph 14 of INFCIEC/153, which has, as you know, been incorporated in all safeguards agreements with the individual States concerned concluded pursuant to accession to the MPT.

INFCIEC/153 is intended to provide for the application of safeguarda to enable non-nuclear-weapon States (NNWS) parties to the NPT to implement their undertaking made in Article III.1 of the NPT to conclude with the Agency safeguards agreements for the "exclusive purpose of verification of the fulfilment of its (the State's) obligations assumed under this Treaty (NPT) with a view to preventing diversion of nuclear energy from peaceful uses to

Mr. Tariq Rauf Co-ordinator Non-Proliferation Project Canadian Centre for Arms Control and Disarmament 151 Slater Street, Suite 710 Ottawa, Ontario K1P 5H3 Canada



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nuclear weapons or other nuclear explosive devices". The undertakings made by NNWS parties to the Treaty prohibit the use by NNWS of nuclear material for nuclear weapons or other nuclear explosive devices. They do not explicitly exclude or include the possibility of NNWS parties to the Treaty making use of nuclear material for other non-proscribed military purposes.

However, also pursuant to Article III.1 of the Treaty all peaceful nuclear activities in NNWS parties to the Treaty are subject to safeguards. Hence, nuclear material in such States, which might eventually be used for a non-proseribed military purpose would be subject to safeguards until or unless such an event occurred. It was therefore considered necessary to include in INFCIEC/153 a provision (paragraph 14) to deal with a situation where safeguards would not be applied to nuclear material, hitherto subject to safeguards in-the NNWS concerned, which was to be used in non-proscribed military activities. A provision of this nature would be necessary if the Agency were to continue to be able to fulfil its safeguards responsibilities under the individual safeguards agreements concluded with NNWS parties to the NPT.

Paragraph 14 of INFCIRC/153 (corrected) has the same status today as it had at the time of its incorporation in the document. This document has not been amended since the request by the Agency's Board of Governors in 1971 that it should be used in the negotistion of safeguards agreements concluded in connection with NPT.

To the Secretariat's knowledge there is no formal definition of "non-proscribed military activity". We understand that at the time of preparing INFCIRC/153 naval propulsion was commonly considered the most likely use. We also understand that most, if not all, participants in the Committee which prepared IMFCIRC/153 favoured a narrow construction of the term "non-proscribed military activity", and that processes such as enrichment or reprocessing to produce materials for use in such an activity would not themselves be considered as non-proscribed military uses and would therefore be subject to safeguards in the NNWS concerned.

There has been no request up to now to invoke the provisions of paragraph 14 of INFCIRC/153.

Regarding your question 12, while one could envisage highly-enriched uranium being procured for a non-proscribed military activity, but in fact being destined for nuclear weapons or explosive devices, such an action would be a clear violation of the undertakings made under the NPT.

Yours sincerely,

Collign Christopher Herzig Director Division of External Relations

https://www.researchgate.net/ publication/355141191_Opening_Pandora's_Box_Nuclear-Powered_Submarines_and_the_Spread_of_Nuclear_Weapon

AURORA PAPERS 8

Opening Pandora's Box? Nuclear-Powered Submarines and the Spread of Nuclear Weapons

by Marie-France Desjardins and Tariq Rauf

> February, 1988 (Revised June, 1988)

> >

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The Canadian Centre For Arms Control And Disarmament

Authors

Marie-France Desjardins is a Research Assistant at the Canadian Centre for Arms Control and Disarmament and is associated with the Centre's three-year research project entitled, *Stemming the Tide of Nuclear Proliferation: Canadian Perspectives on Near- and Long-Term Problems.* She earned her MA on a scholarship at the Norman Paterson School of International Affairs, Carleton University, Ottawa; a BA (History) from the Université du Québec à Montréal and was an Exchange Student at San Francisco State University. Desjardins was a participant at the "New Faces" conference, co-sponsored by the International Institute for Strategic Studies, London, and the Arms Control Association, Washington, DC, held in June 1988 at the Rockefeller Conference Centre, Bellagio, Italy.

Tariq Rauf is Senior Research Associate at the Canadian Centre for Arms Control and Disarmament, and Coordinator of the Centre's three-year research project entitled, *Stemming the Tide of Nuclear Proliferation: Canadian Perspectives on Near- and Long-Term Problems.* He was educated at the University of Toronto (Soviet studies), University of London King's College (war studies). the London School of Economics and Political Science (international relations), and the University of the Punjab (political science). At the University of Toronto he held the Ford Foundation Fellowship in Dual Expertise in the Combined Fields of International Security/Arms Control and Soviet/East European Area Studies. Rauf has taught strategic studies and international relations at the Quaid-e-Azam University and at the National Defence College in Pakistan, and the University of Toronto. He has published on a variety of security and arms control issues, and is the Editor of the *Arms Control Chronicle*.

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中国現代国际关系研究院

Developing safeguards arrangement on AUKUS: Role of the Secretariat, Board of Governors and Member States

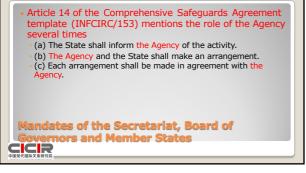
 $\ensuremath{\mathsf{GUO}}$ XIAOBING China Institutes of Contemporary International Relations ($\ensuremath{\mathsf{CICIR}}$)

Questions

- What are the mandates of the Secretariat, Board of Governors and Member States?
- What have the Secretariat, Board of Governors and Member States done up to now?
- What should the Secretariat, Board of Governors and Member States do respectively and cooperatively in the future?

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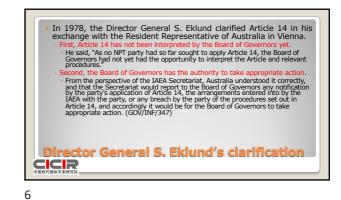






 This is an old question. There is no easy answer to it.
 It was a question when Committee 22 drafted the Comprehensive Safeguards Agreement template (INFCIRC/153) in early 1970s'.

Which part of the Agency has the right to interpret Article 14 and its applicability?

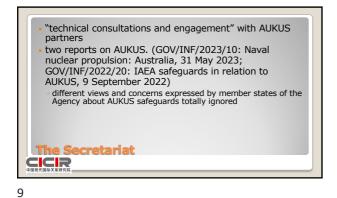


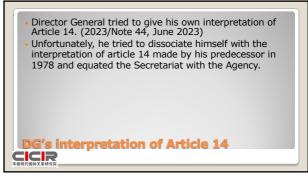
 People tend to have confidences in the professionalism and objectiveness of Director General S. Eklund's response because his judgment was made without involvement of any controversial political factors.
 Director General S. Eklund's clarification

• The question raised by Australia in 1978 has not been completely resolved by the Agency yet, but AUKUS partners and the Secretariat rushed to apply Article 14 and tried to set "a perfect precedence" for the other member states to follow.

What have the Secretariat, Board of Governors and Member states done up to now?

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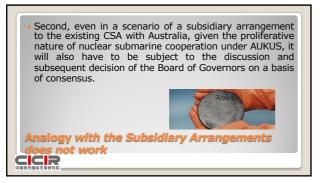






Some tries to compare AUKUS safeguards program with Subsidiary Arrangements. But that analogy is not appropriate. Analogy with the Subsidiary Arrangements not work CICIR

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First, AUKUS is not a routine safeguards program, while Subsidiary Arrangements contain clearly defined and related measures explicitly written into the CSA itself. The AUKUS is unprecedented in several respects. Transfers of tons of weapon grade HEU from nuclear weapon states to a non-nuclear weapon state is unprecedented. The application of article 14 is unprecedented. The IAEA safeguards of tons of weapon grade HEU in Submarine used for military purpose is unprecedented. The future "arrangement" will be quite different from Subsidiary Arrangement.

Analogy with the Subsidiary Arrangements

Subsidiary Arrangement.

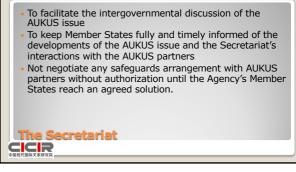
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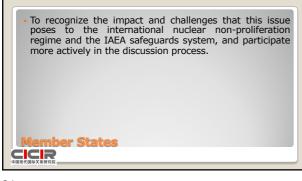




 To establish a Special Committee open to all IAEA Member States, to deliberate on the political, legal and technical issues related to AUKUS, and submit a report with recommendations to the Board of Governors and the General Conference of the IAEA.
 follow the example of committees created by the Board of Governors such as Committees 22 and 24 on the negotiation of 153 and 540
 To establish a special expert group to study the related issues



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Workshop on AUKUS: A Case Study about the Development of IAEA Comprehensive Safeguards

IAEA-VIC Conference Room CR-1 10 May 2024

Comments by Vilmos Cserveny¹

Dear Colleagues,

Let me also thank the Permanent Mission of China for inviting me to this Case Study workshop to make a few personal comments. When I saw the invitation, I wondered what is meant by 'Case Study'. But then, from the definition made by the Western Sydney University in Australia, I understood that "Case Studies are used to understand a situation better whereby they can help decision makers to define the way forward in a specific case or in another case that has similar features". I hope that colleagues participating at this Case Study workshop have a similar understanding of the purpose of our discussions.

Let me also say how important in my view is that Ambassador Ian Biggs shared with us his government's expectations about the effective verification of Australia's continued compliance with its NPT commitments in view of his country's decision to acquire and operate several conventionally-armed, HEU-powered naval submarines in the decades ahead of us. I find this extremely important also in light of the policy discussions about the potential impacts such an HEU based programme may have on the future implementation of policies about the minimisation of the use of HEU in nuclear applications a wide ministerial level support of which is expected at the forthcoming International Conference On Nuclear Security (ICONS) meeting hosted by the IAEA.

Australia's engagement is important also in the context of the recently reiterated expectation of several members of the IAEA Board for broad, transparent and inclusive discussions on the subject. Such discussions are useful and in fact needed in view of the recognition by the AUKUS partners that "there are genuine questions amongst Member States regarding naval nuclear propulsion in Non-Nuclear Weapon States under the NPT", and their stated intention to "continue to engage consistently, openly and transparently with Member States and the Secretariat" in good faith on genuine questions.

In fact, in the past few years, there have been a number of substantive discussions on the subject at the IAEA's Board of Governors, the General Conference, the NPT Review Conference process as well as by studies, publications and events organised by governments, NGOs, academic institutions and the media about the issues at our agenda today. The fact, however, that the IAEA GC has so far not expressed its view on this matter highlights again the need for further dialogue.

The presentations of our distinguished panelists confirmed that there exists considerable amount of theoretical technical, legal and policy knowledge on the subject. The problem, in my view, is that there has been very limited in-depth policy considerations by the Agency on this matter in the past and no practical experience exists with the implementation of Article 14 type of arrangements by NPT parties and the Agency's Secretariat. These issues were only marginally discussed during the

¹ Vilmos Cserveny is former Assistant Director General of the IAEA - all comments in personal capacity. Cserveny@gmail.com

negotiations of INFCIRC/153. Subsequently, through an exchange of letters in 1978 between the then DG of the Agency and the government of Australia (GOV/INF/347), the then DG stated that "no State party to NPT has so far exercised the discretion referred to in Article 14" of INFCIRC/153 (Corr.) and confirmed, on behalf of the IEA Secretariat, Australia's understanding that an 'arrangement' referred to in paragraph 14(b) would be referred to the Board of Governors and would require its approval.

The factual situation has not changed until today. Prior to Australia's and Brazil's recent engagement with the IAEA about their nuclear naval propulsion programme, only Canada approached the Agency on Article 14 in 1987 but lost interest on this issue due to its decision to fold its submarine plan in 1989 for reasons of "unaffordability". And so, since then, no other request was received by the IAEA to invoke the provisions of Article 14 of INFCIRC/153, no practical experience of the implementation of this provision exists.

Another factor that would need to be born in mind is that Article 14 of INFCIRC/153 was not formally part of the Agency's safeguards system at the time the NPT entered into force. Only subsequently, during the drafting of INFCIRC/153, the Agency's Board of Governors agreed that a provision along the line of Article 14 should be included in the model document to deal with a situation where safeguards would not be applied to nuclear material, hitherto subject to safeguards in a NNWS, which was to be used in "non-proscribed military activities".

Historically of course it is regrettable that the IAEA, did not formally obtain the opinion of the parties to the NPT on whether, in their view, the content of the text of INFCIRC/153 - including its Article 14 - satisfies the requirements of the Treaty. At the same time, such a historical omission, in my view, can hardly be rectified nor can it be "undone", not least in view of the fact that in the past 50+ years Article 14 provisions have been incorporated in all CSA's approved by consensus by the Board of Governors while authorising the IAEA DG to implement them.

Therefore, in view of the requests by Australia and Brazil to the Director General for the initiation of formal negotiations about the modalities of Article 14-type of 'arrangements', in my opinion, the focus of the discussions should now be on an appropriate and agreed process of arriving at such arrangements that will hopefully enjoy consensual support by the Board of Governors. As the reports of the IAEA DG testify to this, work in this regard has started even if it is only in its initial phase. The DG has conveyed his confidence that the Secretariat will be able to develop its proposals for the Board's consideration as and when the required technical information from the relevant States will be available.

However, bearing in mind that the Agency has no practical experience in the non-application of safeguards to the type of non-proscribed military activities in question, in my view, over time, it could prove to be useful to involve the Director General's Standing Advisory Group on Safeguards Implementation (SAGSI) in order to assist this work. Historically, SAGSI's involvement in developing important advice on technical safeguards issues where there has been limited to no practical experience by the Agency proved to be helpful. In particular, in handling uncharted technical territories of the application of safeguards such as the development of the Agency's 93+2 programme or the model Additional Protocol, to mention only a few. I also recall that, time and again, sharing SAGSI's advice to the DG with the Board of Governors usefully served a consensual decision making on complex and complicated safeguards matters. Bearing in mind also that "one size usually does not fit all", SAGSI's considerations and technical wisdom in the process of developing appropriate safeguards approaches pursuant to the requests by Australia and Brazil would in my view useful. In cases where additional specific expertise relating to e.g., submarines and their operation would be required, such expertise could be obtained for use by SAGSI.

Dear Colleagues,

In concluding, I hope you do not mind if I take liberty to refer to the recent book written by the IAEA's former DG, Hans Blix, entitled "A Farewell to Wars". The former Australian chief of staff to Hans Blix and later to Mohamed ElBaradei, John Tilemann, in his recent review of Hans Blix's new book, writes, among other things, that "A Farewell to Wars is a timely contribution to the debate in Australia, and elsewhere, of the relative weight to be accorded to diplomacy in the promotion of national and international security. Hans Blix is from the realist school and acknowledges the contributions of deterrence to global restraints on the use of force. But he makes a compelling case for a greater focus on diplomacy and detente, both to reduce security threats and to build structures and norms to further limit the use of violence, and to contain international competition within agreed boundaries" - John Tilemann writes.

While I thank again to the Permanent Mission of China for hosting this Case Study workshop, I recommend you Dr Blix's book and his timely and wise counsel, also in the context of the subject of our important discussion today.

Vienna, 10 May 2024

Elements presented by the Secretariat during the Workshop on 10 May 2024

(Provided by Mr. Ionut Suseanu)

- The Agency is an intergovernmental organization established by the Statute (Art. I of the Statute); 178 States are parties to the Statute and they have the authority to interpret its provisions; objectives (Art. II), functions (Art. III), roles of PMO (Art. V and VI), DG and the Secretariat (Art. VII).
- The safeguards or control function of the Agency set out in Art. III.A.5 of the Statute is different than the "assistance" function which is addressed in Art. III.A.1-4, 7, and Art. IX-XI.
- Art. III.A.5 authorizes the Agency to establish and administer safeguards designed to
 ensure that assistance made available by the Agency is not used in such a way as to
 further any military purpose; this applies to project and supply agreements approved
 by the Board involving Agency assistance (Art. XI Agency Projects).
- In addition, Art. III.A.5 authorizes the Agency to apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement (e.g. in connection with the NPT or NWFZ treaties) or at the request of a State, to any of that State's activities in the field of atomic energy.
- The Board has the authority to carry out the functions of the Agency, including safeguards (Art. VI.F.). This has been confirmed by subsequent Board practice. The Board has authorized the DG to sign and implement all SG agreements (item-specific, CSA, VOA), now in force for 190 States.
- Since 1959, all safeguards documents (e.g. Inspector Document, first safeguards system (INFCIRC/26) and its subsequent revisions (INFCIRC/66, Rev. 1 and 2), INFCIRC/153, INFCIRC/540 and Safeguards Confidentiality Regime (1997) were developed by MS in the framework of the Board or its Safeguards Committees and approved by the Board.
- Regarding CSAs, the document contained in INFCIRC/153, was negotiated by Member States in the framework of Committee 22 established by the Board in 1970 after the entry into force of the NPT, and it was approved by the Board in 1971. The Board authorized the Director General to use this document as the basis for negotiating CSAs in connection with the NPT, and it has been doing so since 1971 without change. CSA concluded on the basis of INFCIRC/153 are currently in force for 182 NNWS parties to the NPT.
- The safeguards provisions in the Statute are not self- executing; the Agency applies safeguards on the basis of the safeguards agreements in force with States, and regional organizations. For States with CSAs in force, the Agency applies safeguards on the basis of their respective CSA concluded with the Agency pursuant to the authority provided for in Article III.A.5 of the Statute, i.e. "to apply safeguards, at the request of the parties to any bilateral or multilateral arrangement".
- The safeguards agreements set out the States undertakings, rights and obligations of the parties and the relevant safeguards procedures to be applied.

- The issue of compatibility of safeguards agreements, including CSAs based on INFCIRC/153, and the Agency's Statute as regards the statutory legitimacy of nonexplosive military applications of nuclear material subject to the Agency's safeguards system was considered by the Board in early 80's. The study carried out at that time by the Director General concluded that this statutory requirement is met under all types of safeguards agreements, including INFCIRC/153-type agreements. The Board took note of this study.
- The State's undertaking in Article 1 of the CSA is to accept safeguards on all nuclear material in "all peaceful nuclear activities within its territory, under its jurisdiction or carried out under its control anywhere". This is in accordance with Article III.1 of the NPT. The Agency has the right and obligation to apply safeguards, in accordance with the provisions of the CSA, on all such material to verify that it is not diverted to nuclear weapons or other nuclear explosive devices.
- The use of nuclear material required to be safeguarded under a CSA, whether produced domestically or imported, for nuclear-powered submarines was envisaged by Member States during the negotiations of Committee 22, it was agreed and reflected in paragraph 14 of INFCIRC/153, and included subsequently in the CSAs approved by the Board. Therefore, this is part of the legal framework, i.e. CSAs concluded on the basis of INFCIRC/153 which the Board has authorized the Director General to sign and implement. This function entrusted to the DG by the Board has been implemented in accordance with the safeguards agreements and under the authority of the Board.
- There is no mechanism in the CSA providing for automatic exclusion from safeguards of nuclear material "required to be safeguarded" under the CSA. This has to be done through the arrangement provided for in Article 14 of the CSA. Regarding the relevant reporting procedures of nuclear material, the nuclear material produced domestically or imported has to be reported to the Agency as provided for in Art. 34 (c) and 91-95. The definition of "inventory change" in the CSA also refers to receipts from a non-safeguarded (non-peaceful) activity and shipment for a non-safeguarded (non-peaceful) activity; none of these provisions have an exclusion for nuclear material used in naval nuclear propulsion or transferred for a non-proscribed military activity in a CSA State. Such advance notification enables the Agency to plan its activities under the CSA, prior to the time when the arrangement in Art. 14 becomes effective.
- Article 14 of the CSA allows the State to use nuclear material which is required to be safeguarded under the CSA in a nuclear activity, such as nuclear propulsion for submarines, provided that the State makes an arrangement with the Agency in this regard.
- Under Art. 5 of the CSA, the Agency has the obligation to protect confidential information coming to its knowledge in the implementation of the CSA. The Agency cannot not publish or communicate to any State, organization or person any information obtained by it in connection with the implementation of the CSA, including with respect to information received from a State in relation to Art. 14 arrangement, except that specific information relating to such implementation in the State may be given to the Board and to such Agency staff members as require such

knowledge by reason of their official duties in connection with safeguards, but only to the extent necessary for the Agency to fulfil its responsibilities in implementing the CSA.

- Since September 2021, the DG addressed the matter in his statements to the Board and also in the SIR and specific reports to the Board. In this context, DG pointed out, inter alia, that:
 - the legal obligations of the parties and the non-proliferation aspects are paramount; the Agency's role in this process is foreseen in the existing legal framework and falls strictly within its statutory competences;
 - the Agency will continue to have its verification and non-proliferation mandate as its core guiding principle and it will exercise it in an impartial, objective and technical manner;
 - the technical discussions initiated with two States with CSAs in force which notified the Agency of their decisions to acquire naval nuclear propulsion would need to address all aspects related to the application of safeguards to nuclear material and related facilities prior to and after the required arrangements would become effective, as well as the elements to be included in such arrangement; the Agency will consider in addition, which provisions of the Additional Protocol would be applicable, as well as any transparency measures that might be offered in this regard.
 - during this process, we will act in strict accordance with the letter and spirit of the legal framework (CSA, AP and the Statute) and keep the Board informed at all stages of our consultations.
 - The legal aspects to be discussed concern paragraph 14 of INFCIRC/153 as a whole and will include:
 - the State party's commitment that the use of the nuclear material in a non-proscribed military activity will not be in conflict with an undertaking the State may have given, and in respect of which Agency safeguards apply (e.g. an item-specific safeguards agreement or a project and supply agreement), that the nuclear material will be used only in a peaceful nuclear activity;
 - Duration of the arrangement;
 - Reporting arrangements, which do not involve any approval or classified knowledge of the military activity or relate to the use of nuclear material therein.
 - Regarding the issue of interpretation of the CSA provisions, DG clarified during the Board meeting in June last year that there are specific provisions on the interpretation and application of the CSA in articles that correspond to paragraphs 20 and 21 of INFCIRC/153. Paragraph 20 provides that the State party to the CSA and the Agency "shall, at the request of either, consult about any

question arising out of the interpretation or application of [the CSA]", including paragraph 14. Pursuant to paragraph 21, the State party to the CSA has the right to request that "any question arising out of the interpretation or application of [its CSA] be considered by the Board". So interpretation where it is a matter between the State party concerned and the Secretariat, this is according to the existing legal framework.

 DG also informed the Board on several occasions that he will ensure a transparent process that will be solely guided by the Agency's statutory mandate and the relevant safeguards agreements and he will continue to keep the Board of Governors and Member States informed of this work and to transmit the arrangement when finalized to the Board of Governors for appropriate action.