

情况通报

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> **普遍分发** 中文 原语文:英文

中华人民共和国常驻国际原子能机构代表团的信函

1. 2024 年 5 月 29 日,秘书处收到中华人民共和国常驻国际原子能机构代表团的普通照会及其附文。

2. 谨此按请求分发该普通照会及其附文,以通告全体成员国。

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

编号: CPMV/2024/71

国际原子能机构 秘书处

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向国际原子能机构秘书 处致意,并谨此向秘书处提交中国常驻代表团于2024年5月10日在维也纳国际中心举 办的"AUKUS:关于国际原子能机构全面保障的发展的案例研究"研讨会的总结。中 国常驻代表团希望及时将本照会及随附总结作为《情况通报》文件正式分发全体成员 国。

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借此机会再次向国际原 子能机构秘书处致以最崇高的敬意。

[印章] 2024 年 5 月 23 日 • 维也纳

<u>主席的总结</u>

AUKUS:关于国际原子能机构全面保障的发展的案例研究

中国常驻代表团 2024 年 5 月 10 日 在维也纳国际中心 CR-1 组织的研讨会

说明:本总结系为向 2024 年 6 月理事会会议提供资料而准备,并为了促进原子 能机构框架内有关 AUKUS 核潜艇采购计划的政府间讨论过程,目的是提高成 员国对与执行 INFCIRC/153 (Corr.)号文件第 14 条有关的保障问题的敏感性和 复杂性的认识。

5 月 10 日,中国常驻维也纳代表团在维也纳国际中心组织了题为 "AUKUS:关于国际原子能机构全面保障的发展的案例研究"的研讨会(议程 和发言全文附后)。来自国际原子能机构(原子能机构)50个成员国以及学术 界的 100 多名代表出席了研讨会。中华人民共和国常驻代表李松大使阁下在研 讨会上作了介绍性发言。澳大利亚驻国际原子能机构代表伊恩•比格斯大使阁 下也出席了研讨会,并发表了自己的见解。

在中国常驻代表团一年前主办的首届 AUKUS 研讨会讨论的基础上,今年的研讨会重点讨论了拟议的 AUKUS 核潜艇合作的各个方面及其对原子能机构 全面保障体系的影响。四位专家小组成员以个人身份发言,并提供了评估和意见:

 维也纳裁军和防扩散中心高级研究员、原子能机构法律事务办公室防 扩散和决策机构前处长 Laura Rockwood 女士阐述了"原子能机构的保 障传统:原子能机构保障体系发展的典型历史案例,包括与不适用保 障或特别保障程序有关的安排";

¹ 本"主席的总结"仅供资料目的,其中涵盖了所提出的主要议题和与所宣布的主题有关的讨论领域,既未 打算寻求所有与会者的一致同意,也不意味着包罗万象和面面俱到。

- 莫斯科能源和安保研究中心主任 Anton Khlopkov 先生论述了"AUKUS 及其武器级核材料的转让:原子能机构保障的新实践、新领域和新发展";
- 原子能机构总干事办公室核查与安保政策协调处前处长Tariq Rauf先生 分析了"第14条与 AUKUS:普遍适用的方法是否必要/可行?如何界 定非歧视性和普遍适用的保障方案、保障目标、保障措施和特别程 序?";
- 中国现代国际关系研究院高级研究员郭晓兵先生演讲的题目是:"制定 AUKUS 的保障安排:秘书处、理事会和成员国的作用"。

另有四位专家和学者应邀作为评论员以个人身份发言,为讨论提供了重要 输入:

- 维尔莫斯·舍文尼先生,原子能机构前助理总干事;
- Nikolai Khlebnikov 先生,俄罗斯驻原子能机构保障执行常设咨询组代表,原子能机构技术支助司前司长;
- Naeem Ahmad Salik 先生,伊斯兰堡战略远景研究所执行主任;
- 赵学林先生,中核战略规划研究总院副研究员。

原子能机构法律事务办公室防扩散和决策机关处处长 Ionut Suseanu 先生代表原子能机构秘书处就研讨会议程项目法律方面问题作了专题介绍。研讨会与会者讨论了他在专题介绍中提出的一些观点。(Suseanu 先生提供的题为"秘书处在 2024 年 5 月 10 日研讨会上介绍的要点"的专题介绍附后)。

在这次研讨会上,除主席总结的见解外,发言者和讨论者还特别强调了以 下见解。

1. AUKUS 合作是两个有核武器国家基于地缘政治考虑,首次打算与一个无核武器国家军事盟友开展核潜艇合作,并将涉及以大量武器级高浓铀为燃料的舰艇核动力推进反应堆的转让,其中预计将使用四吨足以生产 160 个核爆炸装置的 93%-97%高浓铀。

2. AUKUS 号核潜艇合作显然不是原子能机构无核武器成员国与原子能机构 秘书处之间的一项例行和平保障项目。而且,AUKUS 项目与一些无核武器国 家在本国开发以低浓铀为燃料的核动力潜艇有着本质区别,特别是在未来的核 查活动方面。

3. INFCIRC/153(Corr.)号文件中关于不对非禁止军事活动适用原子能机构 保障的第14条的适用和执行提出了新的挑战。这将开创一个重要先例,同时对 《不扩散核武器条约》无核武器国家核活动申报的正确性和完整性以及基于 《不扩散核武器条约》的国际核不扩散体制的完整性提出了挑战。

4. 不对核动力攻击潜艇中多个重要量武器级高浓铀适用原子能机构保障,这 是前所未有的。这一问题如果不以公开、透明、负责任和包容的方式得到处 理,可能会对原子能机构保障体系和相关核查实践的完整性和权威性产生不利 影响。

5. 由于 INFCIRC/153(Corr.)号文件第 14 条的主要内容起草得不好和不准 确,且缺乏明确性和定义,因此,其执行前景引发了许多政策、法律和技术问题。第 14 条的适用范围和执行限制从未得到界定或阐述,因此,原子能机构理 事会从未为核准或采取"适当行动"的目的对其进行过审议或评估。秘书处对 这一问题的法律审议有限,且没有提供任何先例或实际经验,以供处理与《不 扩散核武器条约》无核武器缔约国执行第 14 条类型安排有关的实践和关切。

6. 原子能机构的保障结论以证据标准为基础。因此,任何不对非禁止军事活动适用保障的安排都必须是透明的,并对原子能机构(大会和理事会)和所有其他有生效"全面保障协定"的国家负责。原子能机构大会尚未审议这一事项,也未达成任何与执行"全面保障协定"有关的谅解,因此突出表明迫切需要进一步对话。

7. 秘书处和原子能机构成员国应考虑建立或利用各种论坛,促进就"全面保障协定"第14条所述必要的"安排"达成商定的共同谅解,包括理事会的特别委员会、独立的国际技术专家、保障执行常设咨询组,以及关于不对 AUKUS 核潜艇计划适用保障的技术简况介绍会和会议,所有有关各方和感兴趣的成员国都应参与上述努力。

8. 在无核武器国家使用保障之外、打算用于非禁止的军事核活动的核材料之前,需要就任何执行 INFCIRC/153(Corr.)号文件第14条的概念、术语和影响达成谅解。无论达成的任何安排的最终形式如何,其设计必须不会对"全面保障协定"的可信度和普遍适用性产生不利影响。

9. 与会者对李松大使召集此次研讨会并作介绍性发言表示感谢,对澳大利亚常驻原子能机构代表伊恩•比格斯大使出席会议并发言表示欢迎,指出AUKUS合作伙伴、成员国和秘书处之间持续、公开和透明的接触是紧迫和必要的,并鼓励AUKUS合作伙伴参加今后关于INFCIRC/153(Corr.)号文件第14条的研讨会和讨论。研讨会期间还强调了今后继续举办类似研讨会的益处。

研讨会上表达了不同的见解和关切,这进一步反映了 AUKUS 合作的复杂 性和争议性。

1. 研讨会简要回顾了 INFCIRC/153(Corr.)第14条的谈判历史,以及原子能 机构在制定保障相关事项的程序和导则时实际采取的各种方法。一些见解认 为,原子能机构过去在这一问题上进行的深入政策审议非常有限,《不扩散核 武器条约》缔约国和原子能机构秘书处在解释或执行第14条类型的安排方面没 有实际经验。一些见解声称,《不扩散核武器条约》和 INFCIRC/153(Corr.) 号文件并未禁止舰艇核动力推进。而其他见解则强调成员国和技术专家,包括 保障执行常设咨询组,在解决过去出现的新颖和复杂的技术保障问题方面的关 键作用。

2. 关于第 14 条的适用问题,仍然存在争议。一些见解认为,鉴于 AUKUS 号 核动力潜艇合作的性质及其开创先例的性质,该事项必须首先经过理事会讨论 并在协商一致的基础上做出决策,而且透明地在法律协定框架内开展工作对于 核不扩散体制至关重要。其他见解称,谈判人员列入第 14 条是为了确保将用于 此类军事用途的核材料排除在保障之外不会成为将核材料转用于武器计划的漏 洞。他们指出,这一点反映在原子能机构缔结的几乎所有"全面保障协定" 中,而 INFCIRC/153 (Corr.)号文件中的条款编号大体上与实际"全面保障协 定"中的条款编号相对应。一些见解强调,谁有权解释第 14 条及其适用,仍然 是一个未决问题。

3. 在这方面,秘书处、理事会和成员国在解释和制定 AUKUS 保障安排方面 的作用仍然是讨论中一个有争议的问题。一些见解强调,有关安排应包括原子 能机构成员国包括理事会的讨论和协商一致,以保持原子能机构保障体系的普 遍性和有效性。一些见解坚持认为,理事会应当在制定有关第 14 条的政策和技 术谅解方面发挥更大的主导作用。一些见解认为,从表面上看,第 14 条并不要 求也不排除理事会核准;因此,任何此类安排都将提交理事会采取"适当行 动",并将由理事会决定采取何种"适当行动"(在这方面,有人回顾说,原 子能机构秘书处记录在案地历来同意这样的见解,即第 14(b)条所述安排将由 秘书处提交理事会,并需要理事会核准)。与此相反,其他一些见解则坚持认 为,与"全面保障协定"的解释和执行有关的事项,包括第 14 条,本质上具有 政治性,必须让原子能机构所有成员国和《不扩散核武器条约》缔约国参与。

4. 关于 AUKUS 核动力潜艇合作的影响,一些见解指出,鉴于 AUKUS 的合作是前所未有的,其中涉及在保障之外转让大量武器级高浓铀,因此,将制定的任何保障方案都会规定第14条对今后在核动力潜艇采购计划的适用问题。因此,成员国在原子能机构框架内进行专业技术和政府方面不限成员名额的讨论被认为是必要的,也是至关重要的。一些见解对高浓铀燃料核动力潜艇计划可能对今后执行尽量减少在核应用中使用高浓铀的政策产生的影响表示关切,因为预计原子能机构即将在维也纳举行的核安保国际会议(ICONS2024)将在部长一级对此给予广泛支持。

上述观点的分歧凸显了就 AUKUS 开展全面、包容和透明的政府间讨论过 程的重要性和必要性。对 AUKUS 案例研究及其关于不适用保障的拟议"安 排"的讨论只是这一过程的开端。研讨会期间提出了以下问题,值得原子能机 构所有有关成员国进一步深入思考和讨论:

- 谁有权利或权力解释 INFCIRC/153 (Corr.)号文件第 14条?原子能机
 构秘书处是否有权力或授权在没有成员国参与的情况下解释《不扩散
 核武器条约》的规定?
- 如何定义"非禁止军事活动",由谁来定义?
- "原子能机构"的定义是什么:是成员国、总干事、秘书处,还是成员
 国加上总干事和秘书处的原子能机构集合体?

- 理事会和成员国为何没有在制定有关执行 INFCIRC/153 (Corr.)号文 件第 14 条的政策和技术谅解方面发挥主导作用?
- 对于以高浓铀为燃料的舰艇核动力推进反应堆和燃料来说,什么才是 可信的保障方案和相关技术目标?
- 如果《不扩散核武器条约》的无核武器国家执行 INFCIRC/153 (Corr.)第 14 条不对拟用于非和平活动的核材料适用保障的规定,那 么根据"附加议定书"得出更广泛的结论将受到何种影响?
- "全面保障协定"将如何处理向《不扩散核武器条约》的无核武器国家 转让以高浓铀为燃料的舰艇核动力推进反应堆的问题?
- 对于将于 2024 年下半年开始在澳大利亚港口对核动力潜艇进行的维护
 活动,将适用何种技术性保障措施?
- 原子能机构将如何确定"军事活动的机密情报"和"其中核材料的使用"的可信性和准确性?原子能机构是否有权对舰艇核动力反应堆进行设计资料核实?
- 第 14(c)条提到报告安排不应包含对在要求不适用保障的军事活动中使用核材料的任何批准或机密情报,这是否意味着当事国没有义务向原子能机构通报所声称的核活动(无论是舰艇核动力推进还是其他活动)?
- 谁来决定什么是军事标准的机密情报,又是基于什么标准?
- 对 AUKUS 潜艇项目适用保障能否被视为技术"援助",这种"援助"是否会违反《国际原子能机构规约》第二条?
- 澳大利亚需要落实哪些保障措施,才能确保其核动力潜艇项目的问责 制和透明度,特别是考虑到将使用四吨或更多的武器级高浓铀?
- 原子能机构如何核实当事国关于未受保障的非禁止军事活动用核材料 总量和同位素组成的申报的正确性和完整性?
- 对将根据第 14 条制定的 AUKUS 保障安排进行解释是否属于秘书处和 理事会的专属管辖范围?

- 关于不对非禁止军事活动适用保障的报告安排的范围和内容是什么?
- 如何评价这前所未有的 AUKUS 项目对原子能机构现有保障体系的挑战,特别是在原子能机构就所有保障、安全和安保事项进行所有相关成员国参与的包容、透明、不限成员名额的磋商这一标准实践方面,以及在涉及原子能机构保障发展的每一个重大步骤的问题上协商一致的传统方面?
- 有关成员国可向总干事和秘书处提供哪些支持,以促进就有关第 14 条的解释和执行事项进行不限成员名额的磋商和举行技术简况介绍会?
- 秘书处应发挥什么作用,以促进关于 AUKUS 的政府间讨论过程?
- AUKUS 核潜艇合作的保障安排是否会成为今后可能开展的类似合作的 先例和准则?

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

INFCIRC/1213

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,

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")

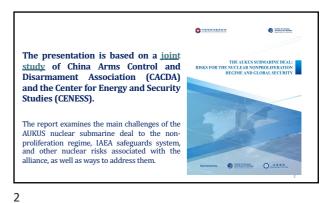
6. Final thoughts regarding the question of precedent

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.



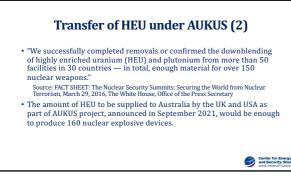


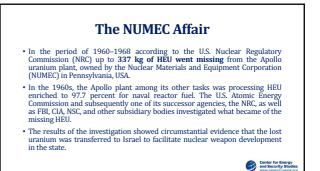
AUKUS Nuclear Submarine Deal • The USA and the UK (NWSs) embarked on unprecedented nuclear submarine cooperation with Australia (NNWS). • In practical terms, the US and UK will assist Australia in establishing fleet of 8 nuclear-powered submarines in total Australia's Acquisition of the SSNs in the Context 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.







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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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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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 formal definition of "non-proscribed military activity</u>". 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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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)

> >

4

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

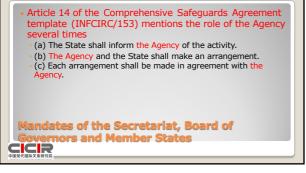
 $\ensuremath{\mathsf{GUO}}$ XIAOBING China Institutes of Contemporary International Relations ($\ensuremath{\mathsf{CICIR}}$)

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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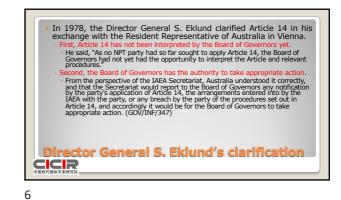






 This is an old question. There is no easy answer to it.
 It was a question when Committee 22 drafted the Comprehensive Safeguards Agreement template (INFCIRC/153) in early 1970s'.

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

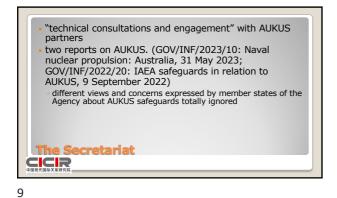


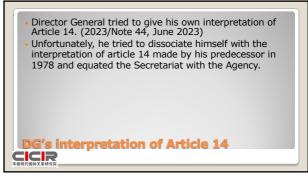
 People tend to have confidences in the professionalism and objectiveness of Director General S. Eklund's response because his judgment was made without involvement of any controversial political factors.
 Director General S. Eklund's clarification

• 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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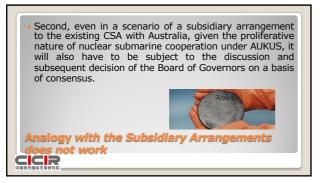






Some tries to compare AUKUS safeguards program with Subsidiary Arrangements. But that analogy is not appropriate. Analogy with the Subsidiary Arrangements not work CICIR

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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.

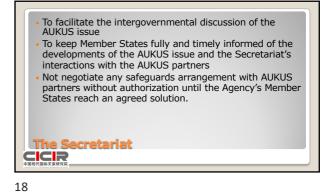
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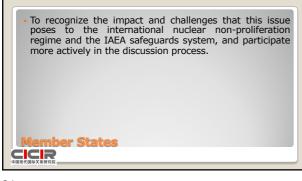




 To establish a Special Committee open to all IAEA Member States, to deliberate on the political, legal and technical issues related to AUKUS, and submit a report with recommendations to the Board of Governors and the General Conference of the IAEA.
 follow the example of committees created by the Board 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.