

Treading Lightly Within the Nuclear Non-Proliferation Regime: An Examination of the Non-Proliferation Treaty in the Context of AUKUS and Nuclear-Powered Submarines

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In September 2021, Australia, the United Kingdom, and the United States unveiled a landmark security partnership known as AUKUS. AUKUS will give the United States a formidable tool to deter Chinese aggression by providing Australia with nuclear-powered naval submarines (SSNs). Nonetheless, AUKUS poses significant legal risks because it raises questions about compliance with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). This Note examines the NPT text and its application to SSNs using the interpretive framework of the Vienna Convention on the Law of Treaties (Vienna Convention).

The NPT classifies nuclear material in one of two ways: “nuclear weapons or other nuclear explosive devices” or “peaceful nuclear activities.” However, the treaty does not define these classification terms. Consequently, SSNs occupy a grey area within the NPT because they do not clearly fit within the ordinary meanings of a “nuclear weapon” or of a “peaceful nuclear activity.”

Recourse to supplementary means of interpretation under the Vienna Convention indicates that SSNs cannot be considered weapons or explosives under the NPT and that non-explosive military uses of nuclear energy, including SSNs, must be considered peaceful as that term is used in the treaty. Therefore, member states are permitted to operate or transfer SSNs in accordance with the applicable International Atomic Energy Agency safeguards requirements. Consequently, if SSNs are recognized as a peaceful activity under the NPT, then AUKUS submarines qualify for an exemption from safeguards that is reserved for “non-proscribed military activities.”

An accurate understanding of how AUKUS fits within the NPT will generate credibility among allies, discredit opposition from adversaries, and uphold the integrity of the non-proliferation regime. To that end, this Note

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provides the legal analysis and historical background necessary for policymakers to mitigate risks while achieving the strategic potential of AUKUS.

INTRODUCTION	1459
A. “AUKUS Is Born”	1459
B. AUKUS and Nuclear Technology	1462
I. THE NPT	1464
A. <i>Travaux Préparatoires</i> : Diplomatic and Negotiating History	1464
B. Interpretive Framework	1468
1. <i>Vienna Convention Articles 31 and 32</i>	1469
2. <i>Object, Purpose, and Context</i>	1472
C. Relevant NPT Provisions	1474
1. <i>Overview</i>	1474
2. <i>Primary NWS and NNWS NPT Obligations:</i> <i>Articles I and II</i>	1475
3. <i>Safeguards: Article III and IAEA INFCIRC/153</i>	1478
4. <i>Paragraph 14 of INFCIRC/153</i>	1481
II. APPLICATION OF THE NPT TO THE AUKUS SUBMARINE DEAL	1482
A. Nuclear-Powered Submarines Are not Weapons or Explosives Under the NPT	1483
1. “ <i>Nuclear Weapons.</i> ”	1484
2. “ <i>Other Nuclear Explosive Devices.</i> ”	1485
B. Nuclear-Powered Submarines Are a Peaceful Activity Under the NPT	1487
1. <i>Object and Purpose</i>	1487
2. <i>Paragraph 14: Subsequent Agreement</i>	1489
3. <i>Paragraph 14: Subsequent Practice</i>	1490
III. CONCLUSION AND POLICY IMPLICATIONS	1492

Introduction

A. “AUKUS is Born”¹

In September 2021, Australia, the United Kingdom, and the United States unveiled “a new enhanced trilateral security partnership.”² The partnership is known as AUKUS, an acronym that denotes the three participating countries. Australian Prime Minister Scott Morrison introduced the partnership with a triumphant tone: “AUKUS is born . . . a partnership where our technology, our scientists, our industry, [and] our defense forces are all working together to deliver a safer and more secure region that ultimately benefits all.”³

The creation of AUKUS was a landmark event in geopolitics and in American defense strategy. AUKUS transpired in the context of a rapidly developing Chinese military threat. In 2020, the Pentagon reported that the People’s Liberation Army Navy had become the largest in the world, surpassing the number of ships in the U.S. Navy.⁴ At the same time, China is in the process of transforming its nuclear arsenal.⁵ U.S. intelligence predicts that China will possess around 1,000 nuclear weapons by 2030, approaching parity with the United States and Russia.⁶ More recently, Russia’s invasion of Ukraine has given AUKUS new urgency by forcing western policymakers to entertain the prospect that China will follow Russia’s example and invade Taiwan.⁷

AUKUS gives the United States and its allies a formidable tool to deter Chinese aggression. The partnership envisions military integration with the potential to reshape the balance of power in the Pacific—first and foremost by providing Australia with a fleet of nuclear-powered naval submarines

1. Remarks on the Australia-United Kingdom-United States (AUKUS) Security Agreement with Prime Minister Scott Morrison of Australia and Prime Minister Boris Johnson of the United Kingdom, 2021 DAILY COMP. PRES. DOC. 1 (Sept. 15, 2021), <https://www.govinfo.gov/content/pkg/DCPD-202100758/pdf/DCPD-202100758.pdf> [<https://perma.cc/4279-ELBT>] [hereinafter AUKUS Announcement] (quoting Australian Prime Minister Scott Morrison’s remark, “[a]nd so, friends, AUKUS is born”).

2. *Id.*

3. *Id.*

4. *China Now Has the World’s Largest Fleet, Alarming Its Pacific Rival*, THE ECONOMIST (Sept. 26, 2020), <https://www.economist.com/united-states/2020/09/26/china-now-has-the-worlds-largest-fleet-alarming-its-pacific-rival> [<https://perma.cc/4NXW-3QVX>].

5. Andrew F. Krepinevich, Jr., *The New Nuclear Age*, FOREIGN AFFS. (April 19, 2022), <https://www.foreignaffairs.com/articles/china/2022-04-19/new-nuclear-age> [<https://perma.cc/CL5Z-7HSP>].

6. *Id.*

7. See Stacie L. Pettyjohn & Becca Wasser, *A Fight Over Taiwan Could Go Nuclear*, FOREIGN AFFS. (May 20, 2022), <https://www.foreignaffairs.com/articles/china/2022-05-20/fight-over-taiwan-could-go-nuclear> [<https://perma.cc/4XKG-TP6N>] (associating Russian nuclear “saber-rattling” with the prospect of war in Taiwan).

(SSNs⁸) but not with nuclear weapons themselves.⁹ Michèle Flournoy, former U.S. Undersecretary of Defense for Policy, has argued that “if the U.S. military had the capability to credibly threaten to sink all of China’s military vessels, submarines, and merchant ships in the South China Sea within 72 hours, Chinese leaders might think twice before, say, launching a blockade or invasion of Taiwan.”¹⁰ With the AUKUS submarine deal, the United States has taken a crucial leap in that direction.

However, the strategic value of providing Australia with SSNs poses significant legal risks. Sharing nuclear propulsion technology raises questions about U.S. compliance with the international nuclear non-proliferation regime, namely the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).¹¹ The NPT prohibits states that possess nuclear weapons (NWSs) from sharing them with states that do not possess nuclear weapons (NNWSs), and it prohibits NNWSs from acquiring nuclear weapons.¹²

Shortly after the AUKUS announcement, China filed objections with the International Atomic Energy Agency (IAEA).¹³ China alleged that AUKUS “undermines regional peace and stability, and constitutes serious risks of nuclear proliferation in contravention of the objective and purpose of the [NPT].”¹⁴ Russia objected to AUKUS on similar grounds, alleging that “[p]lans to use the framework of AUKUS to build nuclear-powered submarines for the Australian Navy by the United States and the United Kingdom have a destabilizing effect on the NPT regime.”¹⁵ And one month

8. In the U.S. Navy, “SSN” is the formal designation for an attack submarine, which is powered by a nuclear propulsion engine and has the capability to deliver cruise missiles but not nuclear warheads. *Attack Submarines – SSN*, U.S. NAVY, <https://www.navy.mil/Resources/Fact-Files/Display-FactFiles/Article/2169558/attack-submarines-ssn/> [https://perma.cc/K8KV-P3AC] (Oct. 8, 2021). This Note uses the term SSN, shorthand for submersible ship (nuclear), as a blanket designation for any naval submarine powered by nuclear propulsion, regardless of whether that vessel is armed with nuclear warheads.

9. AUKUS Announcement, *supra* note 1, at 1 (quoting Prime Minister Morrison as stating, “[b]ut let me be clear: Australia is not seeking to acquire nuclear weapons or establish a civil nuclear capability”).

10. Michèle A. Flournoy, *How to Prevent a War in Asia*, FOREIGN AFFS. (June 18, 2020), <https://www.foreignaffairs.com/articles/united-states/2020-06-18/how-prevent-war-asia> [https://perma.cc/EBX9-LD73].

11. *See* Treaty on the Non-Proliferation of Nuclear Weapons, *opened for signature* July 1, 1968, 21 U.S.T. 483, 729 U.N.T.S. 161 [hereinafter NPT] (binding parties to the treaty to not transfer nuclear weapons to any recipient and to not assist or encourage any non-nuclear weapon state to acquire or develop nuclear weapons).

12. *Id.* at 487–89, 729 U.N.T.S. at 171.

13. Int’l Atomic Energy Agency [IAEA], *Communication dated 29 October 2021 from the Permanent Mission of the People’s Republic of China to the Agency*, IAEA Doc. INFCIRC/965 (Nov. 1, 2021).

14. *Id.*

15. Int’l Atomic Energy Agency [IAEA], *Communication dated 19 November 2021 from the Permanent Mission of the Russian Federation to the Agency*, IAEA Doc. INFCIRC/966 (Dec. 2, 2021).

before Russia invaded Ukraine, Chinese President Xi Jinping and Russian President Vladimir Putin condemned AUKUS as a “serious risk[] of nuclear proliferation” in their now-infamous joint manifesto.¹⁶ NATO was the only other military institution that China and Russia mentioned in the manifesto,¹⁷ a signal that they consider AUKUS a notable threat.

Yet, the AUKUS announcement also unnerved American allies. Australia blindsided France by cancelling a multibillion-dollar French submarine contract when AUKUS was formed.¹⁸ France described the AUKUS deal as “a stab in the back” and withdrew its American and Australian ambassadors in retaliation.¹⁹ The reactions of American adversaries and allies alike sends a clear message: AUKUS is a strategic milestone, but the United States and its AUKUS peers must tread lightly to avoid violating international law.

This Note examines the NPT and its application to AUKUS. Part I describes the negotiating history of the NPT, outlines the interpretive framework of the Vienna Convention on the Law of Treaties (Vienna Convention), and examines the NPT text insofar as it relates to the AUKUS submarine deal.

Part II applies the NPT to the AUKUS submarine deal, using the Vienna Convention methodology, with the goal of determining how the NPT classifies SSNs. Although the ordinary meaning of the text seems to suggest that SSNs cannot be considered peaceful because they serve a military purpose, the NPT text is nonetheless ambiguous as to SSNs. This Part therefore follows the Vienna Convention procedure by referring to supplementary means of interpretation—including negotiating history and the circumstances of the treaty’s conclusion—and reaches two conclusions. First, recourse to the supplementary means of interpretation leads to the conclusion that SSNs cannot be considered weapons or explosives under the NPT. Second, the object and purpose of the NPT, coupled with subsequent agreement and state practice related to the treaty, establish that SSNs must be considered peaceful as that term is used in the NPT. Although the determination that SSNs are a peaceful use of nuclear technology under the

16. The Kremlin, *Joint Statement of the Russian Federation and the People’s Republic of China on the International Relations Entering a New Era and the Global Sustainable Development* (Feb. 4, 2022), <http://en.kremlin.ru/supplement/5770> [<https://perma.cc/4BGW-DXX2>].

17. *Id.*

18. Courtney McBride, *France Recalls Ambassadors to U.S., Australia Over Submarine Deal*, WALL ST. J., <https://www.wsj.com/articles/france-recalls-ambassadors-to-u-s-australia-11631908666> [<https://perma.cc/L5Y3-D6ZB>] (Sept. 17, 2021, 8:14 PM); *French Fury Over the American-Australian Sub Deal*, THE ECONOMIST (Sept. 18, 2021), <https://www.economist.com/europe/2021/09/18/french-fury-over-the-american-australian-sub-deal> [<https://perma.cc/M2KT-4EK2>].

19. *French Fury Over the American-Australian Sub Deal*, *supra* note 18.

NPT is counterintuitive on its face, it is the most appropriate way to interpret the treaty according to the Vienna Convention.

Finally, this Note concludes by explaining the foreign policy implications that stem from this interpretation of the NPT.

B. *AUKUS and Nuclear Technology*

Before proceeding to the legal discussion, it is necessary to provide a brief overview of the nuclear technology involved in nuclear weapons, nuclear power plants, and SSNs. The AUKUS submarine deal is the principal initiative of the trilateral partnership.²⁰ Although the long-term vision of AUKUS involves military participation across many domains,²¹ the submarine deal itself is unprecedented. Nuclear propulsion is arguably the most valuable technology in the American military, “the crown jewels of military technology” according to *The Economist*.²² With AUKUS, Australia is poised to become the first NNWS to obtain SSNs.²³ But AUKUS poses nuclear proliferation risks because the technology involved in American and British SSN reactors is similar to the technology used in nuclear warheads.

Nuclear fission occurs when an atom splits into two or more smaller nuclei and releases energy.²⁴ When the surrounding atoms also split, a chain reaction can occur in fractions of a second.²⁵ Nuclear technology is commonly fueled by uranium.²⁶ The process of enrichment makes uranium more radioactive, and more radioactive uranium is more likely to undergo fission.²⁷ A nuclear power plant requires uranium that is enriched to at least 4% for a self-sustaining chain reaction to occur.²⁸ Uranium enriched below 20% is considered low-enriched uranium, whereas uranium enriched

20. AUKUS Announcement, *supra* note 1.

21. *Id.* (listing “critical technologies, such as cyber, artificial intelligence, quantum technologies, and undersea domains”).

22. *What Does the Australian Submarine Deal Mean for Non-Proliferation?*, THE ECONOMIST (Sept. 17, 2021), <https://www.economist.com/international/2021/09/17/what-does-the-australian-submarine-deal-mean-for-non-proliferation> [<https://perma.cc/CK7F-AWYB>].

23. See Giovanna M. Cinelli, Alex S. Polonsky & Heather C. Sears, *AUKUS Alliance: US and UK to Help Australia Acquire Nuclear-Powered Submarines*, MORGAN LEWIS (Feb. 11, 2022), <https://www.morganlewis.com/pubs/2022/02/aukus-alliance-us-and-uk-to-help-australia-acquire-nuclear-powered-submarines> [<https://perma.cc/6EFL-AZUD>] (explaining that only India and the five permanent members of the UN Security Council (the United Kingdom, United States, China, Russia, and France) currently operate nuclear-powered submarines).

24. Andrea Galindo, *What Is Nuclear Energy? The Science of Nuclear Power*, IAEA OFF. OF PUB. INFO. & COMMUN. (Aug. 31, 2022), <https://www.iaea.org/newscenter/news/what-is-nuclear-energy-the-science-of-nuclear-power> [<https://perma.cc/6S7G-4ZMB>].

25. *Id.*

26. *Id.*

27. *Id.*

28. Jenny Marder, *Nuclear Reactors and Nuclear Bombs: What Defines the Differences?*, PBS, <https://www.pbs.org/newshour/science/what-is-the-difference-between-the-nuclear-material-in-a-bomb-versus-a-reactor> [<https://perma.cc/HX3Y-5CEP>] (Apr. 6, 2011, 9:30 AM).

to 20% or more is considered highly enriched uranium.²⁹ Modern nuclear warheads contain fuel enriched to levels above 85%, and uranium is generally considered weapons-grade when enriched above this level.³⁰

Nuclear weapons involve fast fission, in which a chain reaction of neutron collisions causes an explosion due to the instantaneous production of an enormous amount of energy.³¹ In contrast, nuclear reactors involve controlled fission.³² A nuclear reactor that generates energy for propulsion or electricity controls the neutron supply with equipment such as water or graphite rods.³³ The sustained release of neutrons that occurs over time in controlled fission does not cause an explosive chain reaction, but it does generate heat that can be converted into electricity or propulsive power.³⁴

Different types of SSNs use fuel that contains different levels of enriched uranium. Chinese propulsion systems use low-enriched uranium at 5% enrichment;³⁵ French systems use low-enriched uranium at 5–7.5%;³⁶ Russian and Indian systems use highly enriched uranium at 20–45%;³⁷ yet, American and British systems use highly enriched uranium at 93–97%.³⁸ Therefore, American and British SSNs have a high potential to be diverted to nuclear weapons because they contain weapons-grade uranium.³⁹ Accordingly, the AUKUS submarine deal raises concerns that submarine propulsion technology provided to Australia by the United States or the United Kingdom could be diverted towards the development of nuclear warheads.

29. DANIEL H. JOYNER, INTERPRETING THE NUCLEAR NON-PROLIFERATION TREATY 4 (2011); Int'l Atomic Energy Agency [IAEA], *Management of High Enriched Uranium for Peaceful Purposes: Status and Trends*, at 2, IAEA Doc. TECDOC-1452 (June 2005).

30. JOYNER, *supra* note 29.

31. *Id.*

32. *Id.*

33. *Id.*

34. Galindo, *supra* note 24.

35. GREG THIELMANN & SERENA KELLEHER-VERGANTINI, ARMS CONTROL ASS'N, THE NAVAL NUCLEAR REACTOR THREAT TO THE NPT 2 (2013), https://www.armscontrol.org/files/TAB_Naval_Nuclear_Reactor_Threat_to_the_NPT_2013.pdf [<https://perma.cc/4CWX-BQDU>].

36. TARIQ RAUF, TODA PEACE INST., CRASHING NUCLEAR SUBMARINES THROUGH IAEA SAFEGUARDS 10 (2022), https://toda.org/assets/files/resources/policy-briefs/t-pb-122_tariq-rauf_crashing-submarines-through-iaea-safeguards.pdf [<https://perma.cc/X2EF-36D4>].

37. THIELMANN & KELLEHER-VERGANTINI, *supra* note 35; *see* RAUF, *supra* note 36, at 18–19 (noting that India has either leased nuclear-powered attack submarines from Russia or copied Russian design information to build its own).

38. RAUF, *supra* note 36, at 10.

39. *See* JOYNER, *supra* note 29 (noting that 85% purity is weapons-grade uranium).

I. The NPT

This Part proceeds by summarizing the diplomatic and negotiating history of the NPT. It then outlines the interpretive framework of the Vienna Convention before explaining the provisions of the NPT—and the IAEA mechanisms designed to ensure compliance with these provisions—relevant to the AUKUS submarine deal.

The NPT is the cornerstone of international nuclear non-proliferation law. The central premise of the NPT is a “grand bargain” where NWSs agree not to share nuclear weapons with NNWSs, and NNWSs agree not to acquire nuclear weapons in exchange for the right to pursue peaceful nuclear technology.⁴⁰ Yet, as will be explained below, the NPT does not define “nuclear weapons” or “peaceful nuclear technology.” The proposed AUKUS submarine deal involves two NWSs (the United States and the United Kingdom) assisting an NNWS (Australia) with developing nuclear propulsion technology for use in a military context. AUKUS therefore raises the question of how the NPT regulates SSNs.

SSNs occupy a grey area within the NPT because they do not clearly fit within the term “nuclear weapon,” such as a bomb or warhead, or within the term “peaceful nuclear technology,” such as civilian electricity. In other words, the ordinary meaning of the treaty text is ambiguous as to the status of SSNs. On its face, the ambiguity suggests that sharing nuclear technology for use in SSNs would violate the NPT’s prohibition against sharing weapons or explosives. However, a deeper analysis of the treaty shows that operating or transferring SSNs should actually be considered a peaceful activity that requires the application of safeguards.

A. Travaux Préparatoires: *Diplomatic and Negotiating History*

International efforts to develop a multinational treaty limiting the spread of nuclear weapons began soon after the conclusion of the Second World War. Following the use of the atom bombs on Hiroshima and Nagasaki in August 1945, the newly formed United Nations General Assembly established the Atomic Energy Commission (AEC) in the first resolution it ever passed.⁴¹ Technology enabling the use of nuclear energy for power generation became available in the following years, which encouraged non-proliferation efforts to embrace the peaceful use of nuclear energy alongside

40. UN Secretary General Ban Ki-moon proclaimed that “[a]t its heart, the NPT was a ‘grand bargain’ underpinned by the symbiotic relationship between nuclear disarmament and non-proliferation.” Press Release, Recalling Nuclear-Non-Proliferation Treaty’s ‘Grand Bargain’, Secretary-General Urges Leaders at Review Conference to ‘Abandon Short-Sighted Posturing,’ U.N. Press Release DC/3551 (Apr. 27, 2015); NPT, *supra* note 11, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

41. JOYNER, *supra* note 29, at 6–7; G.A. Res. 1 (I), art. 1 (Jan. 24, 1946).

the elimination of weapons.⁴² The General Assembly mandated that the AEC make specific proposals related to (1) the exchange of scientific information “for peaceful ends,” (2) the control of atomic energy “to ensure its use only for peaceful purposes,” (3) the elimination of atomic weapons “and of all other major weapons adaptable to mass destruction,” and (4) the creation of “effective safeguards by way of inspection” to ensure compliance.⁴³

Although the AEC only existed for three years,⁴⁴ it took two significant steps toward establishing the core principles and mechanisms of the NPT today. First, the AEC mandated that multilateral efforts to regulate nuclear technology should simultaneously pursue three objectives: (1) the encouragement of the peaceful use of atomic energy, (2) the prevention of the proliferation of nuclear weapons, and (3) the disarmament of existing stockpiles of nuclear weapons.⁴⁵ University of Alabama Law Professor Daniel Joyner calls these objectives “the NPT’s three pillars.”⁴⁶ They are a recurring theme in NPT interpretation because they shape the object and purpose of the treaty. The AEC mandate also recognized that a future agreement would require safeguards and inspections—one of the central issues in question in the AUKUS submarine deal.

Second, under the umbrella of the AEC, the United States and the Soviet Union both introduced proposals that formed a blueprint for the NPT’s current structure.⁴⁷ The American representative to the AEC proposed the creation of a treaty-based international organization to manage atomic energy research and production, with the authority to conduct inspections.⁴⁸ The Soviet representative proposed two separate treaties, one to outlaw nuclear weapons and the other to establish a comparable international organization tasked with carrying out inspections.⁴⁹ Ultimately, however, neither plan came to fruition due to political disagreement between the major powers.⁵⁰

President Dwight Eisenhower launched the next phase in the development of international law regulating nuclear proliferation in a 1953 speech to the General Assembly, which is now known as the Atoms for

42. TOM COPPEN, *THE LAW OF ARMS CONTROL AND THE INTERNATIONAL NON-PROLIFERATION REGIME* 5 (2017).

43. G.A. Res. 1946, *supra* note 41, at art. 5.

44. COPPEN, *supra* note 42.

45. JOYNER, *supra* note 29, at 11, 31.

46. *Id.*

47. *Id.* at 7–8.

48. *Id.* at 7.

49. *Id.* at 8.

50. *2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT): Background*, UNITED NATIONS, <https://www.un.org/en/conf/npt/2015/background.shtml> [<https://perma.cc/LUK8-CAVE>].

Peace speech.⁵¹ By 1953, the United States no longer had a “monopoly of atomic power” because the Soviet Union and the United Kingdom had both acquired nuclear weapons of their own.⁵² Recognizing both the prospect of the peaceful use of nuclear energy and the danger of an arms buildup, Eisenhower proposed the establishment of “an international atomic energy agency.”⁵³ The agency would have two primary responsibilities: “the impounding, storage and protection of the contributed fissionable and other materials” and “[t]he more important responsibility . . . [of] devis[ing] methods whereby this fissionable material would be allocated to serve the peaceful pursuits of mankind.”⁵⁴ The Atoms for Peace plan encompassed the objectives of the AEC as well as the American and Soviet proposals for an international organization.

Eisenhower’s proposal resulted in the establishment of the IAEA in 1957.⁵⁵ The IAEA is “the institutional realization of the Atoms-for-Peace” plan because it embodies the dual-use bargain of “access to peaceful applications of atomic energy in exchange for verified pledges to forego proscribed military uses of the atom.”⁵⁶ The IAEA is a separate entity from the NPT and is governed by a separate multilateral treaty, the Statute of the IAEA (IAEA Statute).⁵⁷ The parties to the IAEA originally conceptualized it as a repository that would gather fissile material from nuclear-weapons states and manage peaceful civilian projects for the member states.⁵⁸ However, the IAEA never ended up fulfilling many of these intended functions.⁵⁹ Instead, the IAEA’s primary function became the administration of safeguards on peaceful nuclear facilities. As explained below, the IAEA had established a safeguard system before the NPT emerged, and upon ratification, the NPT

51. Dwight D. Eisenhower, Atoms for Peace Speech to the U.N. General Assembly (Dec. 8, 1953).

52. *Id.* Between 1945 and 1965, four states acquired nuclear weapons after the United States: the USSR (1949), the UK (1952), France (1960), and China (1964). COPPEN, *supra* note 42, at 5.

53. Eisenhower, Atoms for Peace Speech, *supra* note 51.

54. *Id.*

55. Statute of the International Atomic Energy Agency, *opened for signature* Oct. 26, 1956, 8 U.S.T. 1095, 276 U.N.T.S. 3 [hereinafter IAEA Statute].

56. JOYNER, *supra* note 29, at 9 n.19 (quoting Joseph F. Pilat, *Introduction to ATOMS FOR PEACE: A FUTURE AFTER FIFTY YEARS?* 1, 3–4 (Joseph F. Plat ed., 2007)).

57. IAEA Statute, *supra* note 55, 8 U.S.T. at 1095, 276 U.N.T.S. at 4.

58. JOYNER, *supra* note 29, at 12.

59. See COPPEN, *supra* note 42, at 103 (listing functions that the IAEA never fulfilled, including “being a supplier of nuclear material, generating revenue by running its own fuelcycle-related facilities, playing a role in fostering PNEs, or acting as a broker for the supply of small quantities of nuclear materials for research or certain nuclear components”).

tasked the IAEA with the responsibility to implement safeguards for NPT members.⁶⁰

Between 1957 and 1965, several states submitted proposals to the United Nations to create a treaty regulating nuclear proliferation beyond what was contemplated by the IAEA.⁶¹ Ireland led the diplomatic movement by proposing a series of General Assembly resolutions to reestablish a treaty committee and suspend the supply of nuclear weapons between states during the period of negotiations.⁶² The United States and the Soviet Union both supported the Irish efforts and submitted their own independent proposals.⁶³ This momentum led the General Assembly to unanimously pass what became known as the Irish Resolution in 1961.⁶⁴ The Irish Resolution called for an international agreement under which nuclear states would not provide nuclear weapons or manufacturing technology to non-nuclear states, and non-nuclear weapons states would not acquire nuclear weapons.⁶⁵ The Irish Resolution was therefore the first articulation of the two-pronged structure that now underpins the NPT, which differentiates the responsibilities of NWSs and NNWSs.

After four years of deliberations, the General Assembly finally urged member states to conclude a non-proliferation treaty by passing Resolution 2028 in 1965.⁶⁶ Resolution 2028 tasked the Geneva-based Eighteen-Nation Committee on Disarmament (ENDC)⁶⁷ with drafting a treaty based on the following five guiding principles:

- (a) The treaty should be void of any loop-holes which might permit nuclear or non-nuclear Powers to proliferate, directly or indirectly, nuclear weapons in any form;
- (b) The treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear Powers;

60. JOYNER, *supra* note 29, at 12; *see generally* Int'l Atomic Energy Agency [IAEA], *The Agency's Safeguards System*, IAEA Doc. INFCIRC/66/Rev.2 (Sept. 16, 1968) [hereinafter INFCIRC/66] (outlining the IAEA's safeguards system approved in 1965 to oversee the use of nuclear energy by Member States).

61. *See 2015 Review Conference, supra* note 50 (noting that nuclear non-proliferation was addressed in United Nations negotiations as early as 1957, and the structure of a treaty upholding non-proliferation "as a norm of international behavior" was clear by the mid-1960s).

62. DANIEL H. JOYNER, *INTERNATIONAL LAW AND THE PROLIFERATION OF WEAPONS OF MASS DESTRUCTION* 3–4 (2009).

63. *Id.* at 5–6.

64. *Id.* at 5; G.A. Res. 1665 (XVI), at 5–6 (Dec. 4, 1961).

65. G.A. Res. 1665, *supra* note 64, at 6.

66. G.A. Res. 2028, at 7–8 (Nov. 19, 1965).

67. The ENDC was an independent, Geneva-based multilateral organization that worked closely with the United Nations. JOYNER, *supra* note 29, at 16.

- (c) The treaty should be a step towards the achievement of general and complete disarmament and, more particularly, nuclear disarmament;
- (d) There should be acceptable and workable provisions to ensure the effectiveness of the treaty;
- (e) Nothing in the treaty should adversely affect the right of any group of States to conclude regional treaties in order to ensure the total absence of nuclear weapons in their respective territories.⁶⁸

These guiding principles were rooted in the foundation set by the AEC, the Atoms for Peace plan, and the Irish Resolution. Over the next three years, the ENDC negotiated the text that would eventually become the NPT, and which was modeled on Resolution 2028's principles.⁶⁹

During negotiations, the United States and the Soviet Union were divided over the scope of safeguard inspections and whether NWSs would be permitted to host nuclear weapons in the territory of NNWSs, which the United States and its European allies supported but which the Soviet Union disapproved of.⁷⁰ Additionally, the NWSs focused on non-proliferation, while the NNWSs demanded that the treaty grant the right to use nuclear energy on a peaceful basis.⁷¹

The United States and the Soviet Union proposed a joint draft treaty to the ENDC, which the eighteen members revised and submitted to the General Assembly in May 1968.⁷² The General Assembly adopted this version's text, and the treaty entered into force on March 5, 1970.⁷³ The final draft of the NPT was therefore primarily a product of the United States and the Soviet Union, even though the other ENDC members approved it with revisions. Today, the NPT is "the cornerstone of [the] global nuclear non-proliferation regime."⁷⁴

B. *Interpretive Framework*

This Note follows the method of treaty interpretation established by international law, as codified in the 1969 Vienna Convention.⁷⁵ Articles 31 and 32 of the Vienna Convention, itself a treaty, establish general and supplementary rules of treaty interpretation, respectively.⁷⁶ Articles 31 and

68. G.A. Res. 2028, *supra* note 66, at 8.

69. JOYNER, *supra* note 29, at 16.

70. *Id.* at 16–17.

71. *Id.* at 17–18.

72. *Id.* at 19–20.

73. *Id.* at 20.

74. 2015 Review Conference, *supra* note 50.

75. Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331 [hereinafter Vienna Convention].

76. *Id.* at 340.

32 are widely accepted as customary international law.⁷⁷ Although the United States signed but never ratified the Vienna Convention, the Restatement (Fourth) of Foreign Relations Law incorporates the Vienna Convention provisions that reflect customary international law, including Articles 31 and 32.⁷⁸ The United States Supreme Court generally interprets treaties using an approach consistent with the Vienna Convention.⁷⁹ The State Department has also indicated that the Vienna Convention constitutes an authoritative guide to international treaty law.⁸⁰ Vienna Convention Articles 31 and 32 are therefore binding as a judicial matter within international law and are significant as a reference for diplomatic strategy.

1. Vienna Convention Articles 31 and 32.—Vienna Convention Article 31 lays out the “[g]eneral rule of treaty interpretation.”⁸¹ The text reads as follows:

1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.
2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes:
 - (a) Any agreement relating to the treaty which was made between all the parties in connexion with the conclusion of the treaty;
 - (b) Any instrument which was made by one or more parties in connexion with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty.
3. There shall be taken into account, together with the context:
 - (a) Any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions;
 - (b) Any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation;
 - (c) Any relevant rules of international law applicable in the relations between the parties.
4. A special meaning shall be given to a term if it is established that the parties so intended.⁸²

77. Arbitral Award of 31 July 1989 (Guinea-Bissau v. Sen.), Judgment, 1991 I.C.J. 53, para. 48 (Nov. 12).

78. RESTATEMENT (FOURTH) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 306 (AM. L. INST. 2018).

79. *Id.* § 306 cmt. a.

80. 2 VED P. NANDA, DAVID K. PANSIUS & BRYAN NEIHART, *Vienna Convention on the Law of Treaties*, in LITIGATION OF INTERNATIONAL DISPUTES IN U.S. COURTS § 10:21 (2022).

81. Vienna Convention, *supra* note 75, at 340.

82. *Id.*

The four key components of treaty interpretation under Article 31 are (1) good faith, (2) ordinary meaning, (3) context, and (4) object and purpose. The International Law Commission (ILC), the body that drafted the Vienna Convention, unanimously noted “that the starting point of interpretation is the meaning of the text.”⁸³ Nonetheless, the Commission intended that “the application of the means of interpretation in the article would be a single combined operation.”⁸⁴ Accordingly, Article 31 involves a holistic interpretation of the plain meaning of the text rather than a hierarchical arrangement of elements.⁸⁵

The ILC considers good faith to incorporate the doctrine of *effet utile*, which states that a treaty should be interpreted in a way that gives effect to its provisions.⁸⁶ The ILC explained *effet utile* in a report to the UN General Assembly by stating that “[w]hen a treaty is open to two or more interpretations one of which does and the other does not enable the treaty to have appropriate effects, good faith and the objects and purposes of the treaty demand that the former interpretation should be adopted.”⁸⁷

The context of the text within the overall treaty and the treaty’s object and purpose are considerations that help illustrate the ordinary meaning of the text.⁸⁸ To that end, Article 31(2) indicates that the context includes the preamble, other provisions, and agreements or instruments related to the treaty.⁸⁹

Article 31(3) further indicates that subsequent state practice should be considered alongside context.⁹⁰ Subsequent state practice essentially means action taken under the treaty, including agreements applying or interpreting

83. *Report of the International Law Commission to the General Assembly*, 21 U.N. GAOR Supp. No. 9, at 220, U.N. Doc. A/6309/Rev.1 (1966), *reprinted in* [1966] 2 Y.B. Int’l L. Comm’n 220, U.N. Doc. A/CN.4/SER.A/1966/Add.1.

84. *Id.* at 219.

85. See JOYNER, *supra* note 29, at 23 (describing the “holistic nature of the approach to treaty interpretation mandated by the [Vienna Convention]”).

86. See *Report of the International Law Commission to the General Assembly*, 19 U.N. GAOR Supp. No. 9, at 201, U.N. Doc. A/5809 (1964), *reprinted in* [1964] 2 Y.B. Int’l L. Comm’n 201, U.N. Doc. A/CN.4/SER.A/1964/ADD.1 (“*Ut res magis valeat quam pereat*, often referred to as the principle of effective interpretation . . . reflects a true general rule of interpretation” and is embodied in the requirement that “a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to its terms in the context of the treaty and in the light of its objects and purposes.”).

87. Céline Braumann & August Reinisch, *Effet Utile, in BETWEEN THE LINES OF THE VIENNA CONVENTION?* 47, 53 (Joseph Klingler, Yuri Parhomenko & Constantinos Salonidis eds., 2019) (quoting *Report of the International Law Commission, supra* note 86).

88. JOYNER, *supra* note 29, at 23.

89. Vienna Convention, *supra* note 75, at 340.

90. *Id.*

the treaty made after the treaty became effective.⁹¹ The original draft text contained the phrase “the understanding of all the parties” because the ILC considered actions that represented *all* state parties to be the most authoritative.⁹² That said, states’ “informed acquiescence” to a particular treaty interpretation can also constitute subsequent agreement and practice.⁹³

Next, Vienna Convention Article 32 provides a guide to using “[s]upplementary means of interpretation.”⁹⁴ The text reads as follows:

Recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of article 31, or to determine the meaning when the interpretation according to article 31:

- a. [l]eaves the meaning ambiguous or obscure; or
- b. [l]eads to a result which is manifestly absurd or unreasonable.⁹⁵

Because Article 32 provides *supplementary* means of interpretation, it should only be applied after Article 31 when necessary.⁹⁶ The ILC intended for Article 32 to be used in only two circumstances: (1) to confirm the meaning of the text under Article 31, or (2) if the meaning under Article 31 is ambiguous or leads to an absurd result.⁹⁷ The preparatory work, or *travaux préparatoires*, comprises the negotiating history of the treaty.⁹⁸ Statements made during the negotiating process are most probative when they establish the common understanding of the negotiating parties, as opposed to the understanding of only *some* parties.⁹⁹ Similarly, actions taken by state parties pursuant to the treaty after its entry into force—i.e., subsequent state practice—should also be considered a supplementary means of interpretation when those actions do not reflect the views of *all* state parties.¹⁰⁰

91. *Id.*; *Report of the International Law Commission*, *supra* note 83, at 222.

92. *Report of the International Law Commission*, *supra* note 83, at 222.

93. COPPEN, *supra* note 42, at 96.

94. Vienna Convention, *supra* note 75, at 340.

95. *Id.*

96. *Report of the International Law Commission*, *supra* note 83, at 223.

97. *Id.*; Vienna Convention, *supra* note 75, at 340.

98. See RESTATEMENT (FOURTH) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 306 note on negotiating history (AM. L. INST. 2018) (“The *travaux préparatoires* . . . may include draft proposals prepared for the negotiating conferences; reports from the Rapporteur for a negotiating conference; reports from the drafting committee that accompany a draft of the treaty to the negotiating conference; and statements and proposals made by delegates during [negotiations].”).

99. JOYNER, *supra* note 29, at 25.

100. RESTATEMENT (FOURTH) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 306 cmt c. (AM. L. INST. 2018).

2. *Object, Purpose, and Context.*—The diplomatic history and key provisions of the NPT discussed above support the conclusion that the object and purpose of the NPT includes three elements: (1) an effort to stem the proliferation of nuclear weapons, (2) promotion of the peaceful use of nuclear energy, and (3) a long-term aspiration to reach total nuclear disarmament.¹⁰¹

Under Vienna Convention Article 31(1), a holistic interpretation of the ordinary meaning of the text of the treaty must take its object and purpose into consideration.¹⁰² Therefore, articulating the object and purpose of the NPT will be valuable when interpreting how the NPT applies to the AUKUS submarine deal. Nonetheless, legal scholars disagree on a precise definition of the NPT's object and purpose. This section seeks to situate the NPT within the Vienna Convention framework and is not meant to establish rigid constraints on the meaning of particular NPT provisions.

As explained above, the diplomatic history that led to the drafting of the NPT can be organized into four phases: the AEC, Eisenhower's Atoms for Peace speech, the Irish Resolution, and General Assembly Resolution 2028. Each phase contained elements of the three pillars that now define the NPT (peaceful use, non-proliferation, and disarmament). The AEC mandate sought proposals for exchanging scientific information, encouraging peaceful nuclear technology, creating safeguards to monitor non-proliferation, and eliminating atomic weapons.¹⁰³ The Atoms for Peace plan envisioned that the IAEA would advance non-proliferation and disarmament by serving as a repository of fissile material and that it would advance peaceful use by allocating the fissile material in a controlled manner.¹⁰⁴ The Irish Resolution introduced the two-prong structure that eventually resulted in NPT Articles I and II imposing distinct obligations on NWSs and NNWSs.¹⁰⁵ The grand bargain of the NPT combines the Irish Resolution's model of distinct obligations with Eisenhower's proposition that NNWSs had a right to use nuclear energy on a peaceful basis. The General Assembly then

101. The three elements that comprise the object and purpose of the NPT resemble Daniel Joyner's conception of "the NPT's three pillars." See JOYNER, *supra* note 29, at 11, 31 (listing: (1) encouragement of the peaceful use of nuclear energy, (2) prevention of the proliferation of nuclear weapons, and (3) disarmament of existing nuclear weapons). Joyner's model captures the treaty's object and purpose in a general sense, but there is a debate among legal scholars about whether disarmament should be considered a secondary object. See, e.g., COPPEN, *supra* note 42, at 80–81 (arguing that the primary purpose of the NPT is security-related, rather than humanitarian).

102. Vienna Convention, *supra* note 75, at 340; see also *Report of the International Law Commission*, *supra* note 83, at 219 (describing treaty interpretation as "a single combined operation").

103. G.A. Res. 1946, *supra* note 41, at 9.

104. Eisenhower, Atoms for Peace Speech, *supra* note 51.

105. G.A. Res. 1665, *supra* note 64, at 6.

incorporated the preceding diplomatic efforts into the five guiding principles of Resolution 2028.

The substance of the NPT largely adheres to the Resolution 2028 principles. The non-proliferation obligations in Articles I and II satisfy principle (b), which requires “an acceptable balance of mutual responsibilities and obligations” between NWSs and NNWSs.¹⁰⁶ The Article VI aspiration to pursue disarmament negotiations satisfies principle (c), that the “treaty should be a step towards . . . disarmament.”¹⁰⁷ The safeguards system set forth in Article III satisfies principle (d), which requires “acceptable and workable provisions to ensure the effectiveness of the treaty.”¹⁰⁸ Finally, the text of Article VII is almost identical to principle (e), which requires that the right to conclude regional arms control treaties be protected.¹⁰⁹

The only Resolution 2028 principle not expressly adopted by the text of the NPT is principle (a), which requires that the treaty should be void of any loopholes that would enable proliferation directly or indirectly.¹¹⁰ Nonetheless, it is reasonable to conclude that the object and purpose also discourages interpretations that would enable member states to circumvent their obligations through loopholes. Mohamed Shaker, former IAEA representative to the United Nations, argued that the Resolution 2028 principles are valuable for analyzing the object and purpose of the NPT because they were “the prerequisites for the conclusion of a non-proliferation treaty.”¹¹¹ Along those lines, the treaty text expressly satisfies four of the five Resolution 2028 principles. Plus, non-proliferation is one of the treaty’s central goals. Therefore, it is unlikely that the NPT exclusively overlooks principle (a). Instead, it is more likely that the object and purpose principle discourages states from exploiting gaps in the NPT in a way that would enable proliferation.¹¹²

106. G.A. Res. 2028, *supra* note 66, at 8; NPT, *supra* note 11, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

107. G.A. Res. 2028, *supra* note 66, at 8; NPT, *supra* note 11, 21 U.S.T. at 490, 729 U.N.T.S. at 173.

108. G.A. Res. 2028, *supra* note 66, at 8; NPT, *supra* note 11, 21 U.S.T. at 487–89, 729 U.N.T.S. at 172.

109. G.A. Res. 2028, *supra* note 66, at 8; NPT, *supra* note 11, 21 U.S.T. at 489, 729 U.N.T.S. at 173.

110. G.A. Res. 2028, *supra* note 66, at 8.

111. 1 MOHAMED I. SHAKER, THE NUCLEAR NON-PROLIFERATION TREATY 65 (1980).

112. *But cf.* COPPEN, *supra* note 42, at 123 (explaining that many legal scholars believe that Articles I–II “did not fulfill principle (a) of UNGA resolution 2028” due to their lack of definitions).

C. *Relevant NPT Provisions*

The NPT contains a preamble and eleven articles.¹¹³ The preamble articulates the principles of peaceful use, non-proliferation, and disarmament—the three pillars of the NPT.¹¹⁴ As the negotiating history demonstrates, these principles permeated early nuclear arms discussions in the United Nations General Assembly and remained important until the NPT entered into force.

I. Overview.—Articles I through III comprise the treaty’s non-proliferation regime and are therefore the most important for the purposes of analyzing the AUKUS submarine deal.¹¹⁵ Articles I and II establish the non-proliferation obligations of NWSs and NNWSs, respectively.¹¹⁶ Article III designates safeguards and export controls to regulate the peaceful use of nuclear technology.¹¹⁷

The remaining treaty provisions do not directly regulate the AUKUS submarine deal, but they do reflect principles that are important for interpreting the treaty. Article IV asserts the “inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes.”¹¹⁸ Article V protects that right by guaranteeing that the “potential benefits from any peaceful applications of nuclear explosions will be made available to [NNWSs].”¹¹⁹ As this Note explains below, the NPT never defines the term “peaceful use” of nuclear technology, even though the scope of safeguards under Article III only covers peaceful nuclear activities. Accordingly, Articles IV and V are central to ascertaining the meaning of the term “peaceful purpose” as applied to Article III safeguards.

Article VI then codifies the principle of general nuclear disarmament by declaring that the parties undertake to “pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.”¹²⁰ This

113. NPT, *supra* note 11.

114. JOYNER, *supra* note 29, at 11.

115. NPT, *supra* note 11, 21 U.S.T. at 487–89, 729 U.N.T.S. at 171–72.

116. *Id.* at 487, 729 U.N.T.S. at 171.

117. *Id.* at 487–89, 729 U.N.T.S. at 172.

118. *Id.* at 489–90, 729 U.N.T.S. at 172–73.

119. *Id.* at 490, 729 U.N.T.S. at 173.

120. *Id.*

declaration has generated debate about how much the NPT truly commits members to abandon nuclear weapons altogether.¹²¹

Articles VII through XI are procedural in nature.¹²² Notably, Article VII guarantees states the right to conclude regional-arms-control treaties, and Article VIII calls on member states to convene a Review Conference every five years.¹²³ There have been nine Review Conferences, from 1975 to 2015, and in 1995 the members agreed to extend the treaty indefinitely.¹²⁴ The Review Conference documents can be instructive for understanding the context of the treaty, insofar as they constitute subsequent agreements under Vienna Convention Article 31.

Additionally, the IAEA publishes binding rules that supplement the NPT provisions.¹²⁵ These IAEA rules provide more directions for the state parties to implement their treaty obligations.¹²⁶ In particular, the IAEA has established a procedure for removing safeguards from nuclear materials to be used in a military activity not otherwise prohibited by the treaty.¹²⁷ This rule generated significant controversy following the announcement of AUKUS because it carves out a potential exemption to the safeguards set forth in Article III, but the procedure has never been invoked.¹²⁸

2. *Primary NWS and NNWS NPT Obligations: Articles I and II.*—NPT Article I lays out the primary non-proliferation obligations of NWSs. It is

121. See *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marsh. Is. v. India)*, Judgment, 2016 I.C.J. 256, para. 14 (Oct. 5) (finding that India violated customary international law to pursue good faith negotiations on nuclear disarmament); *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marsh. Is. v. Pak.)*, Judgment, 2016 I.C.J. 553, para. 14 (Oct. 5) (same); *Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marsh. Is. v. U.K.)*, Preliminary Objections, 2016 I.C.J. 833, para. 58 (Oct. 5) (dismissing the Marshall Islands' claims that the United Kingdom breached NPT Article VI by failing to actively pursue nuclear disarmament).

122. NPT, *supra* note 11, 21 U.S.T. at 491–94, 729 U.N.T.S. at 173–75.

123. *Id.* at 491–92, 729 U.N.T.S. at 173–74.

124. *NPT Review Conferences*, IAEA, <https://www.iaea.org/topics/npt-review-conferences> [<https://perma.cc/4PZW-YNLF>].

125. See *infra* section I(C)(3).

126. See *infra* notes 142–145 and accompanying text.

127. See *infra* section I(C)(4).

128. See, e.g., Laura Rockwood, *The Australia-UK-U.S. Submarine Deal: Submarines and Safeguards*, ARMS CONTROL ASS'N (Dec. 2021), <https://www.armscontrol.org/act/2021-12/features/australia-uk-us-submarine-deal-submarines-safeguards> [<https://perma.cc/F5M5-FJTA>] (“Although some will argue that Australia’s sterling nonproliferation credentials should allow for greater flexibility, any arrangement will inevitably be invoked as a precedent by other states.”); see also RAUF, *supra* note 36, at 5 (“For the three AUKUS partner states to take it upon themselves to interpret and to define paragraph 14 exemptions, with or without the IAEA Secretariat’s involvement, cannot command confidence without adequate consultations involving interested member states and experts.”).

divided into two clauses.¹²⁹ The first clause requires NWSs “not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly.”¹³⁰ The second clause requires NWSs not to “assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices.”¹³¹

Interpreting the ordinary meaning of the Article I text gives rise to several issues. As an initial matter, the NPT does not define the terms “nuclear weapon” or “other nuclear explosive device.” The text’s use of distinct terms suggests that Article I prohibitions apply to both nuclear explosives that are intended to be used as weapons (nuclear weapons) and to all other non-weapon nuclear explosives (other nuclear explosive devices).¹³² But without definition, it is not clear whether non-weapon nuclear explosives only include those of a military nature or whether they also include those intended for peaceful purposes.

As this Note explains in further detail in the next Part, the United States has consistently held the position that Article I does not cover nuclear propulsion devices or nuclear-powered submarines.¹³³ For example, before the Senate ratified the NPT, Secretary of Defense Robert McNamara explained to a joint congressional committee that a nuclear-powered submarine is not a weapon within the meaning of the NPT; it is instead a “weapon system.”¹³⁴ Although the U.S. position on the status of propulsion devices within Article I does not resolve the textual ambiguity on its own, such statements are influential in the Vienna Convention framework.

Another issue is whether Article I restrictions apply to complete nuclear weapons but not to component parts. The language of the first clause prohibits NWSs from sharing nuclear weapons but does not specify whether that prohibition only applies to complete weapons or also applies to the parts, materials, or information thereof.¹³⁵ Additionally, the first clause prohibits NWSs from transferring nuclear weapons “to *any recipient whatsoever*.”¹³⁶ In contrast, it could be argued that the prohibition on assistance in the second clause *does* prevent NWSs from transferring parts, materials, or information

129. NPT, *supra* note 11, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

130. *Id.*

131. *Id.*

132. JOYNER, *supra* note 62, at 12.

133. *Id.* at 12 n.31; *see infra* text accompanying notes 200–207.

134. SHAKER, *supra* note 111, at 203 n.29 (“The submarine of course is a *weapon system*, itself. But it is not a nuclear weapon, the nuclear power would be used solely for the purpose of propelling the submarine.”).

135. JOYNER, *supra* note 62, at 11.

136. NPT, *supra* note 11, 21 U.S.T. at 487, 729 U.N.T.S. at 171 (emphasis added).

thereof—as long as that activity would still constitute assistance. But the second clause only applies when the recipient is an NNWS.¹³⁷ As a result, the express terms of Article I do not necessarily prohibit an NWS from assisting the nuclear weapons program of another NWS, short of transferring a complete weapon.¹³⁸

Next, NPT Article II lays out the primary non-proliferation obligations of NNWSs. Article II is divided into three clauses. The first clause requires NNWSs “not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly.”¹³⁹ The second clause requires NNWSs “not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices.”¹⁴⁰ The third clause requires NNWSs “not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.”¹⁴¹

Article II is somewhat more comprehensive than Article I. On one hand, the first clause of Article II imposes a parallel obligation on NNWSs that the first clause of Article I imposes on NWSs, in that the text does not specify whether the prohibition on receiving nuclear weapons or explosive devices applies to parts, materials, or information; rather, it only restricts receipt from “any transferor whatsoever.”¹⁴² On the other hand, the second and third clauses of Article II close any gaps by restricting NNWSs from manufacturing or receiving *assistance* to manufacture nuclear weapons.¹⁴³ Thus, the second and third clauses of Article II are a relatively comprehensive prohibition on NNWSs developing or acquiring nuclear weapons.

Additionally, there is an important difference between the restrictions on NWSs giving assistance in Article I and on NNWSs receiving assistance in Article II. In the second clause of Article I, NWSs are prohibited from giving assistance if the beneficiary is an NNWS.¹⁴⁴ But the third clause of Article II prohibits NNWSs from receiving *any* assistance, without specifying the transferor.¹⁴⁵ Therefore, the ordinary meaning of the Article II text forecloses NNWSs from receiving the assistance of anyone, whereas it is possible to interpret Article I as permitting NWSs to assist other NWSs. However, without definitions for the key terms “nuclear weapon” and “peaceful nuclear activities,” Article II suffers from the same ambiguity as

137. *Id.*

138. COPPEN, *supra* note 42, at 126.

139. NPT, *supra* note 11, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

140. *Id.*

141. *Id.*

142. *Id.*

143. *Id.*

144. *Id.*

145. *Id.*

Article I—the text alone does not answer the question of whether “other nuclear explosive devices” covers propulsion as used in nuclear-powered submarines.

3. *Safeguards: Article III and IAEA INFCIRC/153.*—NPT Article III establishes the framework to regulate peaceful nuclear activity through a system of IAEA safeguards. Article III(1) obligates NNWSs to accept safeguards on “all peaceful nuclear activities” as negotiated in an agreement with the IAEA;¹⁴⁶ Article III(2) regulates the exportation of nuclear material or equipment subject to the safeguards specifications in Article III(1);¹⁴⁷ Article III(3) provides that safeguards should be consistent with member states’ right to use nuclear technology in a peaceful way;¹⁴⁸ and Article III(4) outlines the process by which NNWSs conclude safeguard agreements with the IAEA.¹⁴⁹

Under NPT Article III(1), the NPT tasks the IAEA with the responsibility of verifying NNWSs’ compliance with the NPT provisions.¹⁵⁰ As explained above, the IAEA was established as an independent entity before the NPT entered into force.¹⁵¹ There are two policymaking bodies within the IAEA: the Board of Governors and the General Conference of Member States.¹⁵² The Board of Governors is responsible for approving and enforcing safeguards agreements.¹⁵³ The IAEA communicates to members by publishing information circulars under the symbol “INFCIRC.”¹⁵⁴

The IAEA Statute authorizes the Agency to administer safeguards “to ensure that special fissionable and other materials, services, equipment, facilities, and information . . . are not used in such a way *as to further any military purpose*.”¹⁵⁵ The IAEA Statute also allows parties “to any bilateral or multilateral arrangement” to request that the IAEA exercise its oversight role by administering safeguards to its member states’ peaceful nuclear activity.¹⁵⁶ In other words, the IAEA was authorized to monitor the peaceful nuclear activity of members to international treaties even before the NPT

146. *Id.* at 487–88, 729 U.N.T.S. at 172.

147. *Id.* at 488, 729 U.N.T.S. at 172.

148. *Id.*

149. *Id.* at 489, 729 U.N.T.S. at 172.

150. *Id.* at 487–88, 729 U.N.T.S. at 172.

151. IAEA Statute, *supra* note 55, 8 U.S.T. at 1095, 276 U.N.T.S. at 4; *see supra* text accompanying notes 55–60.

152. *Board of Governors*, IAEA, <https://www.iaea.org/about/governance/board-of-governors> [<https://perma.cc/FGU9-UQ5J>].

153. *Id.*; IAEA Statute, *supra* note 55, 8 U.S.T. at 1107–08, 276 U.N.T.S. at 28, 30.

154. Int’l Atomic Energy Agency [IAEA], *Information Circulars*, at 1, IAEA Doc. INFCIRC/1/Rev.13 (June 1999).

155. IAEA Statute, *supra* note 55, 8 U.S.T. at 1095–96, 276 U.N.T.S. at 6 (emphasis added).

156. *Id.*

entered into force.¹⁵⁷ Hence, it was appropriate for the NPT to designate the IAEA as the international body responsible for overseeing the treaty.

Article III(1) requires NNWSs to:

accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency . . . 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*.¹⁵⁸ Under Article III(4), NNWSs further agree to conclude independent agreements with the IAEA, either bilaterally or in coordination with other states, which become operable within eighteen months after negotiations are initiated.¹⁵⁹ The agreements permit IAEA inspectors to regularly monitor all nuclear material for peaceful use “within the territory of such State, under its jurisdiction, or carried out under its control anywhere.”¹⁶⁰

NPT Article III(2) concerns the obligations of nuclear suppliers.¹⁶¹ It requires that all NPT members undertake “not to provide: (a) source or special fissionable material, or (b) equipment or material” related to the processing or use of fissionable material “to any [NNWS] for peaceful purposes,” unless the material is subject to Article III safeguards.¹⁶² In other words, under Article III(2), IAEA safeguards are required before any NPT state can assist another member with peaceful nuclear technology. In practice, Article III is most relevant to NWSs that might provide technical assistance to NNWSs.

It is important to note that the IAEA had already established a practice to implement safeguards on its members before the NPT was ratified.¹⁶³ The basic understanding of the pre-NPT safeguards system echoed the language in the IAEA Statute that nuclear technology would not be used “in such a way *as to further any military purpose*.”¹⁶⁴ However, the IAEA did not include this exact phrase when it customized a safeguards system for the NPT. Instead, the IAEA adapted its existing safeguards system to serve NPT members under a modified system.

157. *See id.* at 1110, 276 U.N.T.S. at 34 (authorizing the Board of Governors to establish “an appropriate relationship” with “organizations the work of which is related to that of the Agency”).

158. NPT, *supra* note 11, 21 U.S.T. at 487–88, 729 U.N.T.S. at 172 (emphasis added).

159. *Id.* at 489, 729 U.N.T.S. at 172.

160. *Id.* at 488, 729 U.N.T.S. at 172; *see also* JOYNER, *supra* note 62, at 21 (discussing the goal of limiting the burden of IAEA inspection upon NNWSs).

161. NPT, *supra* note 11, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

162. *Id.*

163. *See* INFCIRC/66, *supra* note 60, para. 82 (indicating that the IAEA’s safeguards system, approved in 1965, included safeguards agreements between the Agency and Member States).

164. *Id.* (emphasis added).

In 1972, the IAEA defined how NNWSs conclude safeguard agreements with NPT member states in Information Circular 153 (INFCIRC/153).¹⁶⁵ INFCIRC/153 was designed as a model safeguards agreement that NPT states can use as a template for their own agreements. It requires NNWSs to keep records and provide the IAEA “with information concerning nuclear material subject to safeguards under the Agreement and the features of facilities relevant to safeguarding such material.”¹⁶⁶ An agreement made pursuant to INFCIRC/153 is known as a Comprehensive Safeguard Agreement (CSA).¹⁶⁷

In 1997, the IAEA acted to strengthen the INFCIRC/153 safeguards system by encouraging NPT member states to sign an additional protocol that would increase the IAEA’s inspections capability and access to information regarding peaceful nuclear activity.¹⁶⁸ Whereas CSAs are mandatory for NNWSs under Article III(4), states voluntarily sign on to the additional protocol.¹⁶⁹ Nonetheless, of the 178 states with CSAs in force, 132 have signed additional protocol agreements—including Australia.¹⁷⁰ Additionally, although only NNWSs are required to conclude CSAs with the IAEA, each NWS has also signed a version of a safeguard agreement.¹⁷¹ The United States signed a safeguard agreement in 1978 to encourage NNWSs to sign CSAs themselves.¹⁷² The United Kingdom, France, the Soviet Union, and China each followed suit between 1978 and 1989.¹⁷³ These agreements function as “reduced” versions of a CSA under INFCIRC/153 because the

165. See generally Int’l Atomic Energy Agency [IAEA], *The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, IAEA Doc. INFCIRC/153 (June 1972) [hereinafter INFCIRC/153] (providing guidance for negotiating safeguards agreements).

166. *Id.*; see also IAEA Statute, *supra* note 55, 8 U.S.T. at 1107–08, 276 U.N.T.S. at 28, 30 (relating to additional oversight duties of international inspectors).

167. COPPEN, *supra* note 42, at 8.

168. Int’l Atomic Energy Agency [IAEA], *Model Protocol Additional to the Agreement(s) Between State(s) and the International Atomic Energy Agency for the Application of Safeguards*, IAEA Doc. INFCIRC/540 (Sept. 1997) [hereinafter INFCIRC/540].

169. JOYNER, *supra* note 62, at 23.

170. Jennifer Wagman, *50 Years of NPT Comprehensive Safeguards Agreements—The Legal Bedrock of Nuclear Verification*, IAEA (Apr. 5, 2022), <https://www.iaea.org/newscenter/news/50-years-of-npt-comprehensive-safeguards-agreements-the-legal-bedrock-of-nuclear-verification> [<https://perma.cc/2B8X-E5XV>]; Int’l Atomic Energy Agency [IAEA], *The Text of the Agreement Between Australia and the Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, IAEA Doc. INFCIRC/217 (Dec. 13, 1972) [hereinafter Australia CSA]; Int’l Atomic Energy Agency [IAEA], *Protocol Additional to the Agreement Between Australia and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, IAEA Doc. INFCIRC/217/Add.1 (Feb. 9, 1998).

171. THIELMANN & KELLEHER-VERGANTINI, *supra* note 35, at 2.

172. *Id.*

173. *Id.* at 2–3.

safeguards only apply to enriched uranium being produced at some civilian facilities but not to any military facilities.¹⁷⁴

4. *Paragraph 14 of INFCIRC/153.*—Paragraph 14 of INFCIRC/153 (Paragraph 14), titled “Non-Application of Safeguards to Nuclear Material to be used in Non-peaceful Activities,” creates a possible limitation to the scope of NPT safeguards.¹⁷⁵ It provides a procedure for states to remove safeguards from nuclear materials to be used in “a non-proscribed military activity” pursuant to an agreement with the IAEA.¹⁷⁶

Still, safeguards exemptions under Paragraph 14 do not automatically apply to any non-weapon nuclear activity of a military nature. Instead, NPT member states must follow a three-step process to request Paragraph 14 exemptions from the IAEA. First, the state must inform the IAEA: (a) that the activity does not conflict with an undertaking to which safeguards apply and that it “will be used only in a peaceful nuclear activity,” and (b) 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.”¹⁷⁷ Second, the state must make an arrangement with the IAEA identifying “the period or circumstances during which safeguards will not be applied.”¹⁷⁸ Third, the arrangement “shall be made in agreement with the Agency” but “shall not involve any approval or classified knowledge of the military activity.”¹⁷⁹ In short, an NPT member state must sign a separate agreement with the IAEA, supplemental to a CSA and an Additional Protocol, that describes the activity and the time period during which safeguards would be exempt. Nonetheless, to date the procedure has never been tested.

As the next Part explains further, Paragraph 14 is central to determining the status of the AUKUS submarine deal within the NPT because it is a departure from the IAEA’s pre-NPT approach to safeguards. It acknowledges that nuclear technology may be permitted in furtherance of *some* military purposes, whereas nuclear technology in furtherance of *any* military purpose was prohibited by the IAEA prior to the NPT.¹⁸⁰ However, there is an open legal question as to whether nuclear-powered naval submarines qualify as a “non-proscribed military activity” within the meaning of Paragraph 14.

It is difficult to determine whether a given activity qualifies for an exemption under Paragraph 14 for two reasons. First, the plain meaning of

174. *Id.*

175. INFCIRC/153, *supra* note 165, para. 14.

176. *Id.*

177. *Id.* (emphasis omitted).

178. *Id.*

179. *Id.*

180. *Id.*; INFCIRC/66, *supra* note 60, para. 82.

the treaty text does not resolve the issue because the NPT does not provide the requisite definitions. Second, there is minimal legal interpretation of Paragraph 14 because no state has ever invoked its use.

First, the NPT does not define the terms “nuclear weapon,” “other nuclear explosive device,” or “peaceful nuclear activities.” As a result, the text is ambiguous regarding where to draw the line between peaceful use and use as a weapon. Further complicating the matter, the NPT does not specify the precise scope of activity that safeguards are meant to cover. Instead, Article III(1) establishes that NNWSs are required to accept safeguards “for the exclusive purpose of verification of the fulfilment of its obligations assumed under this Treaty.”¹⁸¹ That designation creates a problem: the purpose of safeguards is to verify compliance with treaty obligations, but those obligations are ambiguous. Without further clarification, it is unclear if safeguards should apply to the grey area in between weapons and peaceful activity.

Second, since no state has ever fully invoked Paragraph 14, there is minimal legal precedent to resolve the textual ambiguity. In lieu of a legal precedent construing Paragraph 14, it is useful to consider examples of states that have expressed a desire to acquire nuclear-powered submarines. The IAEA included Paragraph 14 in INFCIRC/153 at the behest of Italy and the Netherlands.¹⁸² At the time, Italy aspired to build nuclear-powered naval transport and the Netherlands aspired to acquire nuclear-powered submarines.¹⁸³ However, both countries abandoned their pursuit of naval nuclear propulsion and neither proceeded to request exceptions to safeguards.¹⁸⁴ Consequently, Paragraph 14 has never been tested.

Thus far this Note has covered the diplomatic history of the NPT, the Vienna Convention interpretive framework, and the key provisions of the text relevant to the AUKUS submarine deal. The next two subparts draw on these lessons, using the Vienna Convention methodology, to answer the fundamental question at issue: How does the AUKUS submarine deal fit within the NPT?

II. Application of the NPT to the AUKUS Submarine Deal

This Part applies the principles and obligations of the NPT to the AUKUS submarine deal. Although the ordinary meaning of the text seems

181. NPT, *supra* note 11, 21 U.S.T. at 487–89, 729 U.N.T.S. at 172.

182. Frank von Hippel, *Mitigating the Threat of Nuclear-Weapon Proliferation via Nuclear-Submarine Programs*, 2 J. FOR PEACE & NUCLEAR DISARMAMENT 133, 133 (2019).

183. *Id.*; see also *Dutch Navy to Get 2 Atom Submarines*, N.Y. TIMES, June 25, 1964, at 16, <https://www.nytimes.com/1964/06/25/archives/dutch-navy-to-get-2-atom-submarines.html> [<https://perma.cc/BC2T-QGJ6>] (“The Netherlands plans to have a nuclear-powered submarine by 1972 and at least one more afterward.”).

184. von Hippel, *supra* note 182, at 134.

to suggest that SSNs cannot be classified as peaceful because they serve a military purpose, a more extensive examination of the NPT pursuant to Vienna Convention Articles 31 and 32 indicates that SSNs should be considered peaceful—as that term is used in NPT Article IV. The analysis proceeds in two parts. First, supplementary means of interpretation under Vienna Convention Article 32 lead to the conclusion that SSNs cannot be considered weapons. Second, subsequent agreement and state practice related to Paragraph 14 of INFCIRC/153 establish that non-explosive military uses for nuclear energy must be considered peaceful under NPT Article IV.

A. *Nuclear-Powered Submarines Are not Weapons or Explosives Under the NPT*

The NPT contains three possible terms that could be used to classify nuclear activity: “nuclear weapons” and “other nuclear explosive devices” under Articles I and II, or “peaceful uses of nuclear energy” under Articles IV and V. SSNs occupy a grey area within the NPT because they do not cleanly fit within the ordinary meaning of any of those terms. Hence, the ordinary meaning of these terms seems to suggest that SSNs cannot be classified as peaceful because they serve a military purpose. However, the *travaux préparatoires* and the context of the NPT’s conclusion demonstrate that SSNs cannot be considered weapons or explosive devices because submarines are not weapons in and of themselves and because nuclear propulsion does not involve the requisite explosive characteristic.

One very recognizable use of peaceful nuclear technology is civilian power generation in a nuclear power plant.¹⁸⁵ Of the myriad other forms of peaceful nuclear technology, almost all examples are civilian—such as ionized radiation for agricultural or medical purposes.¹⁸⁶ In contrast, when a military vessel relies on nuclear propulsion, it is not directed towards civilian ends. Even SSNs that are not armed with nuclear warheads have a warfighting purpose. Thus, a superficial understanding of the term “peaceful nuclear activities” would seem to not include SSNs because SSNs are military technology rather than civilian technology.

However, accepting the premise that SSNs cannot be considered peaceful would leave only three possible classifications. SSNs would have to be classified as either “nuclear weapons” or “other nuclear explosive devices” under Articles I and II. Alternatively, SSNs would fall outside the

185. See, e.g., Eisenhower, Atoms for Peace Speech, *supra* note 51 (juxtaposing “peaceful power from atomic energy” with military arms build-up).

186. See SHAKER, *supra* note 111, at 282, 292 (describing the objective of peaceful nuclear technologies as “either the generation of energy or the use of ionizing radiation,” which have numerous uses in food and agriculture, as well as medicine and biology).

scope of the NPT altogether. A more extensive examination of the NPT pursuant to Vienna Convention Article 32 reveals that each of these classifications would be inconsistent with the way the negotiating history construed those terms and with the object and purpose of the NPT.

I. "Nuclear Weapons."—Recourse to supplementary means of interpretation under Vienna Convention Article 32 is appropriate because the meaning of NPT terminology remains ambiguous with regard to SSNs.¹⁸⁷ Accordingly, the *travaux préparatoires* can clarify the scope of activity that the terms “nuclear weapon” and “other nuclear explosive device” cover, even though the NPT does not define those terms. As mentioned above, the use of separate terms for weapons and other explosives in Articles I and II suggests that nuclear explosives intended to be used as weapons are conceptually distinct from all other non-weapon nuclear explosives. The ordinary meaning of a nuclear weapon is a device such as a bomb or warhead meant to be used in a warfighting capacity. The 1954 U.S. Atomic Energy Act and the 1967 Treaty of Tlatelolco for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco) both contain definitions that confirm this reading.¹⁸⁸ It is appropriate to consult the Atomic Energy Act and the Treaty of Tlatelolco because the U.S. delegation to the ENDC favored the definitions in those instruments.¹⁸⁹ Moreover, the International Court of Justice has recognized that references to comparable legal instruments that address the same subject matter can constitute admissible supplementary means of interpretation under Vienna Convention Article 32.¹⁹⁰

The Atomic Energy Act defines an “atomic weapon” as “any device utilizing atomic energy . . . the principal purpose of which is for use as, or development of, a weapon, a weapon prototype, or a weapon test device.”¹⁹¹ Similarly, the Treaty of Tlatelolco defines “nuclear weapon” as “any device which is capable of releasing nuclear energy in an uncontrolled manner and which has a group of characteristics that are appropriate for use for warlike

187. See Vienna Convention, *supra* note 75, at 340 (permitting recourse to the preparatory work or circumstances of treaty conclusion when interpretation according to Article 31 “[l]eaves the meaning ambiguous or obscure”).

188. SHAKER, *supra* note 111, at 201–02.

189. See *id.* at 203–04 (stating that the U.S. delegation to the ENDC favored a definition which included nuclear weapons and nuclear explosives for peaceful purposes but distinguished between the two based on use).

190. See Paula F. Henin, *In Pari Materia Interpretation in Treaty Law*, in BETWEEN THE LINES OF THE VIENNA CONVENTION?, *supra* note 87, at 234 & n.154 (explaining how *in pari materia* treaties may be “admissible under Article 32 of the [Vienna Convention] . . . for the purposes of confirming the meaning of a treaty provision” and citing to discussion of the International Court of Justice’s *Oil Platforms* case). The *in pari materia* canon entails reference to another legal instrument that address the same subject matter as an interpretive aid. *Id.* at 214.

191. 42 U.S.C. § 2014(d).

purposes.”¹⁹² The Treaty of Tlatelolco distinguishes the explosive component of the weapon from its propulsive component by adding that “[a]n instrument that may be used for the transport or propulsion of the device is not included in this definition *if it is separable from the device and not an indivisible part thereof.*”¹⁹³ Put differently, a propulsion device is not considered a weapon—even if it propels a warhead—as long as the propulsion component does not itself explode. Under this designation, SSNs should not be considered weapons either. Like a rocket that carries a warhead as a ballistic missile, a submarine is separable from any weapon it may carry. Indeed, many SSNs do not carry nuclear weapons at all—including those that the United States and United Kingdom plan to help Australia develop under AUKUS.¹⁹⁴

2. “*Other Nuclear Explosive Devices.*”—It is not clear whether the term “other nuclear explosive device” only applies to explosives with a military purpose or whether the term also applies to explosives with a non-military purpose. Still, ENDC deliberations during the NPT drafting process indicate that “other nuclear explosive devices” include explosive devices with a peaceful purpose. Recall that the ENDC was the eighteen-member committee responsible for drafting the NPT.¹⁹⁵ In 1967, the ENDC reported to the UN General Assembly that “[i]t was unanimously agreed that the technology of nuclear weapons and peaceful nuclear explosives *was identical.* The majority held that proliferation of peaceful nuclear explosives should be prohibited by a non-proliferation treaty.”¹⁹⁶ This report has two crucial implications. First, “other nuclear explosive devices” most likely encompasses explosions used in a peaceful context. But second, Article I prohibitions only apply to peaceful explosive devices when the device itself is identical to an explosive weapon but is employed in a non-military context, such as digging canals and building dams.¹⁹⁷ Put differently, “other nuclear explosive devices” are nonmilitary *nuclear* munitions in the same way that dynamite is a nonmilitary *conventional* munition.

By this definition, SSNs should not be classified as other explosive devices under Articles I–II because nuclear fission used for propulsion does not produce explosions the way munitions do. As mentioned at the beginning of this Note, nuclear weapons involve fast fission and nuclear reactors

192. Treaty for the Prohibition of Nuclear Weapons in Latin America, art. 5, *opened for signature* Feb. 14, 1967, 6 I.L.M. 521 [hereinafter Treaty of Tlatelolco].

193. *Id.* at 523–24 (emphasis added).

194. AUKUS Announcement, *supra* note 1.

195. *See supra* note 67 and accompanying text.

196. Peter S. Lai (Rapporteur on the Non-Proliferation of Nuclear Weapons), *Rep. of the Preparatory Comm. for the Conf. of Non-Nuclear-Weapon States*, U.N. Doc. A/6817, annex V at 21 (Sept. 19, 1967) (emphasis added).

197. SHAKER, *supra* note 111, at 204.

involve controlled fission.¹⁹⁸ In short, nuclear reactors do not explode the way a nuclear weapon does because controlled fission is designed to mitigate the chain reaction of neutron collisions that causes an explosion.¹⁹⁹ Therefore, SSNs do not have the explosive characteristic that the ENDC originally attributed to weapons and other explosives.

Likewise, U.S. congressional committee hearings indicate that the United States and Soviet Union agreed that SSNs were not weapons within the meaning of Articles I and II. Before the Senate ratified the NPT, U.S. diplomats and Executive Branch officials routinely affirmed to Congress that the United States understood the term “nuclear weapon” to mean only bombs or warheads.²⁰⁰ In 1966, Secretary of Defense Robert McNamara testified to the now-defunct Joint Committee on Atomic Energy about the status of nuclear-powered submarines within the draft of the NPT.²⁰¹ At the time, the United States and Soviet Union were preparing a joint treaty draft to present to the ENDC.²⁰² Specifically, McNamara explained that SSNs are not weapons “within the meaning of a nonproliferation pact. The submarine of course is a *weapon system*, itself. But it is not a nuclear weapon, the nuclear power would be used solely for the purpose of propelling the submarine.”²⁰³

In 1968, Secretary of State Dean Rusk gave similar testimony to the Senate Foreign Relations Committee regarding the overall definition of “nuclear weapon.”²⁰⁴ The official position of the U.S. delegation to the ENDC was that “the treaty does not prohibit the transfer of nuclear delivery vehicles or delivery systems . . . so long as such transfer does not involve bombs or warheads.”²⁰⁵ Rusk’s position mirrored the definition in the Treaty of Tlatelolco because it recognized that the explosive component of a weapon is separable from its propulsive component.²⁰⁶ In a subsequent Senate Foreign Relations hearing, U.S. NPT negotiator Adrian Fisher added that the Soviet Union was aware of the U.S. position and did not object.²⁰⁷

The testimonies of McNamara, Rusk, and Fisher carry interpretive weight under the Vienna Convention for several reasons. First, under Vienna

198. See *supra* note 31 and accompanying text.

199. See *supra* note 31 and accompanying text.

200. See, e.g., *Nonproliferation Treaty: Hearings on Exec. H Before the S. Comm. on Foreign Rels.*, 91st Cong. 319 (1969) (referring to testimony by Secretary of State Dean Rusk in 1968).

201. *Nonproliferation of Nuclear Weapons: Hearing on S. Res. 179 Before the J. Comm. on Atomic Energy*, 89th Cong. 79 (1966) (statement of Hon. Robert S. McNamara, Secretary of Defense).

202. See *supra* note 72 and accompanying text.

203. *Nonproliferation of Nuclear Weapons*, *supra* note 201 (emphasis added).

204. *Nonproliferation Treaty*, *supra* note 200, at 319.

205. *Id.*

206. See *supra* notes 192–193 and accompanying text.

207. See SHAKER, *supra* note 111, at 202–03, 203 n.28.

Convention Article 31(4), “[a] special meaning shall be given to a term if it is established that the parties so intended.”²⁰⁸ The Senate relied on Foreign Relations Committee and Joint Committee on Atomic Energy hearings in its decision to ratify the NPT. This implies that the United States’ acceptance of the NPT was conditioned on the interpretations presented by McNamara, Rusk, and Fisher. Moreover, the United States informed the ENDC and the UN of its position.²⁰⁹ The U.S. definition of “nuclear weapon” meets the criteria of a “special meaning” under Vienna Convention Article 31(4) because the United States intended the treaty to incorporate this meaning and shared its position with the relevant international organizations. Second, Vienna Convention Article 32 permits recourse to the circumstances of a treaty’s conclusion “to confirm the meaning resulting from the application of [A]rticle 31.”²¹⁰ The United States and the Soviet Union were the chief architects of the NPT draft that was ratified.²¹¹ A shared American–Soviet understanding of treaty terminology would therefore have a powerful impact on the circumstances of the treaty’s conclusion. Consequently, the *travaux préparatoires* and circumstances of treaty conclusion help confirm that SSNs should not be classified as weapons or other explosive devices within the meaning of NPT Articles I and II.

B. Nuclear-Powered Submarines Are a Peaceful Activity Under the NPT

Concluding that SSNs are not weapons or explosives leads to the question of whether some nuclear activities are not covered by the NPT at all. If SSNs are neither (a) prohibited as weapons or explosives by NPT Articles I and II nor (b) permitted as peaceful under NPT Article IV, then the NPT would not cover SSNs whatsoever. However, the object and purpose of the NPT, as well as subsequent agreement and practice related to Paragraph 14 of INFCIRC/153, establish that this is not the case. Instead, non-explosive military uses for nuclear energy must be considered peaceful under Article IV.

1. Object and Purpose.—As explained in subpart II(A), the ordinary meaning of the term “peaceful nuclear activities” would seem to only include civilian-use cases.²¹² By that interpretation, any nuclear activity that serves a military purpose but cannot be considered an explosive would be outside the scope of the NPT because those activities would neither be prohibited by

208. Vienna Convention, *supra* note 75, at 340.

209. *Nonproliferation Treaty*, *supra* note 200, at 319 (explaining that the United States’ position was “shown to key members of the ENDC” and “made available to all members of the U.N.”).

210. Vienna Convention, *supra* note 75, at 340.

211. *See supra* notes 72–73 and accompanying text; JOYNER, *supra* note 29, at 19–20.

212. *See supra* note 186 and accompanying text.

Articles I and II nor protected by Article IV. Yet, that result would render the NPT less effective, contradict the purpose of Article III safeguards, violate the non-proliferation principle within the object and purpose of the NPT, and violate the Resolution 2028 opposition to loopholes. Likewise, the ILC's recognition of the *effet utile* doctrine encourages interpreting a treaty in a way that enables its provisions to take effect.²¹³ Accordingly, it would be more appropriate to interpret "peaceful nuclear activities" as meaning every nuclear activity not prohibited by Articles I and II.

The object and purpose of the NPT discourage an interpretation that would leave some nuclear activities outside the scope of treaty obligations. Such an interpretation would increase the risk of member states diverting fissile material towards weapons programs. As the previous section explained, the object and purpose of the NPT uphold the principle of non-proliferation and incorporate an opposition to loopholes. But if the NPT does not cover non-explosive military uses of nuclear technology, member states could pursue nuclear fission in those areas without any safeguards or IAEA oversight. And if a member state manages to achieve highly enriched uranium under the pretense of such an activity, that state could easily divert the uranium to a weapons program. Once the IAEA realizes that the state has achieved nuclear weapons, imposing safeguards would be futile. Therefore, interpreting the treaty in a way that would leave any nuclear activity outside the scope of the NPT would not only risk violating the non-proliferation principle, but it would also create a serious loophole in contravention of Resolution 2028 principle (a).

Conversely, it could be argued that classifying SSNs as peaceful would lead to an absurd result. According to that counterargument, classifying SSNs as weapons or explosives would be more reasonable from the perspective of the NPT's non-proliferation pillar. Specifically, if the NPT considered SSNs to be prohibited weapons, that would give the IAEA more authority to prevent NNWSs from diverting fissile material away from nuclear propulsion programs to weapons programs.

However, the NPT must balance the non-proliferation principle with the principle of peaceful use. Considering that American and British SSNs use weapons-grade highly enriched uranium, it would be even more absurd to interpret the NPT in a way that would leave those vessels outside the scope of the treaty. Further, if the same submarines were to be used for an exclusively civilian purpose—for example, in undersea research operations—there would be no controversy about their classification as peaceful. By the same token, SSNs should be considered peaceful under the meaning that the NPT assigns to that term. As long as SSNs are not armed with nuclear warheads, they use nuclear fission in the same way a civilian

213. See *supra* notes 86–87 and accompanying text.

research submarine would—only as propulsion fuel. For all the foregoing reasons, conventionally armed SSNs should not be transformed into “weapons” just because the navy operates them.

2. *Paragraph 14: Subsequent Agreement.*—Subsequent agreement and practice confirm that every nuclear activity not prohibited by Articles I and II should be considered peaceful under Article IV. Paragraph 14 is crucial to this determination because the term “non-proscribed military activity” recognizes that there are some military uses for nuclear technology that the NPT does not proscribe.

Under Vienna Convention Article 31(3)(a), a “subsequent agreement between the parties regarding the interpretation of the treaty or *the application of its provisions*” should be considered alongside the treaty’s context.²¹⁴ Additionally, under NPT Article III(1), each state party is required to conclude a CSA with the IAEA pursuant to INFCIRC/153.²¹⁵ Thus, INFCIRC/153 functions as a form of subsequent agreement because it facilitates agreements by each state party regarding the application of the NPT’s safeguard provisions. Correspondingly, under Vienna Convention Article 31(3)(b), “[a]ny subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation” should be considered alongside the treaty’s context.²¹⁶ INFCIRC/153 also functions as a form of subsequent practice because, by facilitating the application of NPT Article III safeguards, it establishes the parties’ interpretation of the NPT’s Article III safeguard provisions. Therefore, Paragraph 14 constitutes subsequent agreement and subsequent practice under Vienna Convention Article 32 because it is part of INFCIRC/153.

The IAEA included Paragraph 14 in INFCIRC/153 to create a possible exemption to safeguards for nuclear materials to be used in “a non-proscribed military activity.”²¹⁷ Paragraph 14 has two important interpretive implications. First, it recognizes that at least some nuclear activities that serve a military purpose are not prohibited by the NPT. When the IAEA modified the safeguards protocol that existed before the NPT, it added the term “non-proscribed military activity.”²¹⁸ This was a dramatic shift away from the IAEA’s previous stance that nuclear activity could not be used “*to further any military purpose.*”²¹⁹ Rather, when the IAEA adapted safeguards to fit

214. Vienna Convention, *supra* note 75, at 340 (emphasis added).

215. NPT, *supra* note 11, 21 U.S.T. at 487–88, 729 U.N.T.S. at 172; *see supra* note 167 and accompanying text.

216. Vienna Convention, *supra* note 75, at 340.

217. INFCIRC/153, *supra* note 165, para. 14.

218. *See supra* note 164.

219. IAEA Statute, *supra* note 55, 8 U.S.T. at 1095–96, 276 U.N.T.S. at 6 (emphasis added).

the needs of the NPT, it acknowledged that some military activities—namely, non-explosive military activities—are permitted.

Second, Paragraph 14 indicates that those non-proscribed military activities would be subject to safeguards by default. Absent Paragraph 14 exemptions, safeguards must apply. Taken together, Paragraph 14 proves that “peaceful uses of nuclear energy” do not only mean civilian activities. Instead, in the absence of safeguard exemptions, all activity not prohibited by NPT Articles I and II should be considered peaceful under Article IV. For this reason, Paragraph 14 functions to *close* a loophole because it confirms that no nuclear activities can escape NPT coverage in some form.

3. *Paragraph 14: Subsequent Practice.*—Conduct by NPT member states in relation to Paragraph 14 also indicates that SSNs are “a non-proscribed military activity” that likely qualify for safeguards exemptions. Although no state has ever fully invoked Paragraph 14, several states expressed interest in obtaining naval nuclear propulsion capabilities after INFCIRC/153 was published.²²⁰ Australia and Canada offer the most instructive examples. In 1978, Australia sent a letter to the IAEA Director General seeking confirmation that the IAEA Board of Governors would be responsible for reviewing member state requests to invoke Paragraph 14.²²¹ The Director General’s response was ambiguously worded but implied that the Board does have the ultimate responsibility to grant Paragraph 14 exemptions.²²² It stated that while “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 . . . any breach of the procedures referred to in that paragraph, must be reported to the Board of Governors.”²²³

Canada is the only state that has ever initiated the process of invoking Paragraph 14 in an official manner. In 1987, Canada considered purchasing a fleet of SSNs from France or the United Kingdom.²²⁴ Canada held several rounds of consultations with the IAEA to invoke Paragraph 14 and exempt SSNs from its CSA.²²⁵ However, Canada abandoned the acquisition on cost grounds in 1989 and never concluded a Paragraph 14 agreement.²²⁶

220. Rockwood, *supra* note 128.

221. *Id.*

222. LAURA ROCKWOOD, FED’N OF AM. SCIENTISTS, NAVAL NUCLEAR PROPULSION AND IAEA SAFEGUARDS 2–3 (Aug. 2017), <https://uploads.fas.org/media/Naval-Nuclear-Propulsion-and-IAEA-Safeguards.pdf> [<https://perma.cc/Q5HF-5ENH>].

223. RAUF, *supra* note 36, at 4.

224. *Id.* at 10.

225. *Id.* at 10–11.

226. *Id.* at 11.

Still, the Canada episode sheds light on the IAEA and U.S. approach to Paragraph 14 procedures. In its consultations with Canada, the IAEA stated its understanding that “naval propulsion was considered as the most likely use” of a non-proscribed military activity “at the time of preparing INFCIRC/153.”²²⁷ Furthermore, the United States insisted that Canada not provide the IAEA *any* information related to the submarine reactors, including information on fresh or spent fuel.²²⁸ But that was problematic because it would have prevented the IAEA from even comparing the amount of highly enriched uranium in naval use with the highly enriched uranium involved in Canada’s peaceful activities that were already subject to safeguards.²²⁹

In contrast, Brazil and Iran have both announced their intentions to develop nuclear propulsion programs, but neither has initiated a Paragraph 14 request with the IAEA.²³⁰ Brazil is the only NNWS with a naval nuclear propulsion program in development, but unlike the AUKUS proposal, Brazil’s program is purely domestic and would only involve low-enriched uranium.²³¹ Iran has not even confirmed the existence of an SSN program; its announcement was only an indication of future intent.²³²

Above all, these post-INFCIRC/153 examples demonstrate that Paragraph 14 is an actionable provision of the NPT regime. Even though Paragraph 14 has never been fully invoked, the IAEA has indicated that NPT member states have the right to seek safeguards exemptions for qualifying activities. When Canada initiated the Paragraph 14 process in 1987, it set a precedent establishing that SSNs are a “non-proscribed military activity” that likely qualifies for safeguards exemptions. The IAEA’s representation that “naval propulsion was considered as the most likely use” for Paragraph 14 gives the Canadian precedent authoritative weight, even though Canada never concluded the process. Moreover, Australia’s communications with the IAEA reveal that the Board of Governors has discretion to approve or deny Paragraph 14 requests. Finally, the Brazilian and Iranian pursuits of SSNs do not foreclose the possibility of applying Paragraph 14 to SSNs. Rather, their non-invocation of Paragraph 14 suggests that absent exemptions, the IAEA would treat SSNs like any other peaceful use that requires safeguards.

227. *Id.* at 4–5.

228. *Id.* at 10.

229. *Id.*

230. *Id.* at 15.

231. Rockwood, *supra* note 128.

232. *Id.*

III. Conclusion and Policy Implications

This Note analyzed the text of the NPT in the context of the AUKUS submarine deal. Part I covered the diplomatic and negotiating history of the NPT, described the interpretive framework of the Vienna Convention, and investigated the NPT text relevant to AUKUS. Part II applied the NPT to the AUKUS submarine deal using the Vienna Convention methodology. Although at first the NPT text seems to suggest that SSNs should not be considered peaceful, supplementary means of interpretation establish that SSNs should not be considered weapons or explosives. Ultimately, the object and purpose of the treaty, alongside subsequent agreement and practice, demonstrate that SSNs must be considered peaceful as that term is used in the NPT.

Understanding that the NPT recognizes SSNs as peaceful, and that Paragraph 14 provides the option to remove SSNs from safeguards, will enable the AUKUS parties to have their cake and eat it too. First, this understanding gives the AUKUS parties a path to remain in compliance with their NPT obligations while executing the submarine deal. As argued in the previous section, the United States and United Kingdom are permitted to assist Australia's acquisition of SSNs because SSNs are a protected, peaceful use of nuclear technology under NPT Article IV. Second, exempting SSNs from safeguards under Paragraph 14 will enable Australia to operate the submarines in a manner that is relatively confidential.

Third, and perhaps most importantly, this interpretation does not give third parties any legal grounds to challenge AUKUS. China and Russia both demonstrated their aversion to AUKUS when they filed IAEA objections.²³³ Further, the fact that Chinese President Xi and Russian President Putin condemned AUKUS in their joint manifesto that preceded the current war in Ukraine suggests that opponents of AUKUS will continue to question its lawfulness under the NPT and international law. For that reason, it is crucial that the United States and its allies assert the reasons why AUKUS is inherently lawful under the NPT.

Beyond AUKUS, the recognition that SSNs are a protected, peaceful nuclear technology under the NPT is a net positive for global non-proliferation efforts. Although it may seem counterintuitive to classify a weapons system such as SSNs as peaceful, interpreting the NPT in this way protects the long-term integrity of the NPT. First, interpreting it in a way that treats SSNs as peaceful would uphold the NPT's longstanding principle of peaceful use because it allows NNWSs to pursue all nuclear technologies short of weapons or explosives. In turn, this will enhance NNWSs' incentive

233. *See supra* notes 13–15 and accompanying text.

to continue to comply with the NPT by upholding the “grand bargain.”²³⁴ Second, this interpretation, as opposed to SSNs falling outside the scope of the NPT altogether, amplifies the IAEA’s ability to monitor the use of nuclear technology around the world through safeguards. As this Note explains, interpreting the NPT in a way that would exclude certain activities from the NPT’s safeguards regime would violate the object and purpose of the treaty and render the NPT less effective.

Admittedly, there are also shortcomings associated with classifying SSNs as a protected nuclear technology, but the consequences are relatively minimal in each instance. Interpreting SSNs as a peaceful use of nuclear technology means that any NPT member state, NWSs and NNWSs alike, can pursue SSNs if they have the means to develop or acquire them. From the perspective of NWSs, this is a shortcoming because it ensures that NWSs do not have a monopoly on SSNs the way that they do for nuclear weapons. But AUKUS proves that the United States would prefer the ability to use SSNs in coordination with NNWS allies instead of prohibiting the spread of SSNs to NNWSs.

Still, the AUKUS submarine deal could set a precedent for other NWSs to share SSNs or nuclear propulsion technology with other NNWSs. In that scenario, China or Russia may feel emboldened to share SSNs with rogue states that aim to challenge U.S. interests. For example, Russia could decide to execute an SSN-sharing agreement with Iran or Syria based on the AUKUS model. Iran and Syria are both NNWSs parties to the NPT,²³⁵ and either development would be disadvantageous to the United States.

Nonetheless, it would likely be more difficult for Russia, Syria, or Iran to invoke Paragraph 14 than it would be for the AUKUS states to invoke Paragraph 14. Australia’s communication with the IAEA in 1978 and Canada’s communications with the IAEA in the late 1980s indicate that the IAEA Board of Governors would exercise broad discretion in its decision to approve or reject Paragraph 14 safeguard exemptions.²³⁶ Consequently, the Board may be less likely to approve Paragraph 14 requests by states that have a track record of flouting international legal obligations. For example, the UN General Assembly’s determination that Russia’s invasion of Ukraine violated the UN Charter’s use of force provisions may persuade the IAEA not to accept Russian assurances that it would only share SSNs on a peaceful

234. See *supra* note 40 and accompanying text.

235. See *Treaty on the Non-Proliferation of Nuclear Weapons: Status of the Treaty*, U.N. OFF FOR DISARMAMENT AFFS., <https://treaties.unoda.org/t/npt> [<https://perma.cc/7ZY2-FAVR>] (listing Iran and Syria as NPT signatories).

236. See *supra* notes 221–226 and accompanying text.

basis.²³⁷ In that sense, norms of international law should serve as a bulwark against antagonistic states seeking to share SSNs without safeguards. Plus, states who adhere to an Additional Protocol—like Australia—have already built a level of trust with the IAEA that may facilitate the IAEA’s approval of a Paragraph 14 agreement.

Overall, the NPT interpretation that this Note proposes follows the Vienna Convention framework and upholds the NPT principles of non-proliferation and peaceful use simultaneously. Interpreting the NPT in this way will enable U.S. policymakers to achieve the strategic objectives of AUKUS while complying with international law. In an era of great power competition, the United States has a heightened interest in defending the norms of international law. Adhering to its NPT obligations based on this Note’s interpretation of the treaty will benefit American interactions with allies and adversaries alike. For allies, complying with the NPT can prevent the United States from alienating friends the way that the AUKUS announcement alienated France. For adversaries, complying with the NPT will deny China and Russia the ability to challenge AUKUS on legal grounds.

237. *See, e.g.*, Permanent Rep. of Ukraine to the U.N., Letter dated Feb. 28, 2014 from the Permanent Rep. of Ukraine to the United Nations addressed to the President of the Security Council, U.N. Doc. A/ES-11/L.1 at 1–2 (Mar. 1, 2022) (condemning Russia’s February 2022 invasion of Ukraine and “recalling the obligation of all States under Article 2 of the Charter to refrain . . . from the threat or use of force against the territorial integrity or political independence of any State”).