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Iran and The Limits of the Nuclear Non-Proliferation Regime

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ESSAY

IRAN AND THE LIMITS OF THE NUCLEAR NON-PROLIFERATION REGIME

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We may face no greater challenge from a single country than from Iran.

–National Security Strategy of the United States of America[1]

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1. NAT'L SEC. COUNCIL, NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA 20 (Mar. 2006).

INTRODUCTION

The 2006 U.S. National Security Strategy correctly identifies the threat to international peace and security posed by the unchecked global proliferation of advanced nuclear technology. The specific concern centers around nuclear fuel cycle technology, which produces the fissile material needed to fuel nuclear power plants.[2] The very same facilities that produce nuclear fuel can also be used to produce the fissile materials used in nuclear weapons.[3]

The Treaty on the Non-Proliferation of Nuclear Weapons ("NPT"), concluded in 1968, is the cornerstone of global non-proliferation efforts.[4] The NPT is unique among global arms control treaties as it recognizes two classes of states; those states that manufactured and detonated a nuclear weapon prior to January 1, 1967, known as Nuclear Weapon States ("NWS"), and all other states, known as Non-Nuclear Weapon States ("NNWS").[5] The NPT represents a grand bargain between these two classes of states. The NNWS, party to the NPT ("NNWS parties"), agreed to not acquire nuclear weapons and to accept safeguards on all their peaceful nuclear activities.[6] In return, the NWS, party to the NPT ("NWS

2. *See id.* at 19–20 (stating that the "strategy focuses on controlling fissile material with two priority objectives," including keeping "states from acquiring the capability to produce fissile material suitable for making nuclear weapons" and preventing the transfer of fissile material "from states that have this capability to rogue states or terrorists").

3. *See id.* at 20 (stating that the first objective requires the closing of a loophole in the NPT, that allows governments, "under the guise of a civilian nuclear power program," to produce fissile material for nuclear weapons).

4. *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 (entered into force Mar. 5, 1970) [hereinafter NPT].

5. *See id.* art. IX, 21 U.S.T. at 492–93, 729 U.N.T.S. at 174; 2 MOHAMED I. SHAKER, THE NUCLEAR NON-PROLIFERATION TREATY: ORIGIN AND IMPLEMENTATION 1959–1979, at 194–99 (1980) (noting that this bifurcation of states arose from the American and Soviet Union treaty drafts of the NPT).

6. *See* NPT, *supra* note 4, art. II, 21 U.S.T. at 487–88, 729 U.N.T.S. at 171–72 (compelling NNWS parties "not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices . . . ; not to manufacture or otherwise acquire nuclear weapons . . . ; and not to seek or receive any assistance in the manufacture of nuclear weapons"); *id.* art. III, 21 U.S.T. at 487–88, 729 U.N.T.S. at 172 (requiring NNWS parties "to accept safeguards . . . for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy

parties"), agreed to pursue negotiations in good faith to eliminate their nuclear stockpiles.[7] At the core of the crisis currently facing the nuclear non-proliferation regime, the NPT upholds the right of all states to develop nuclear technology for peaceful purposes without discrimination.[8]

The purpose of the safeguards provided for by the NPT is to verify the compliance of the NNWS parties with their basic undertaking not to acquire nuclear weapons.[9] In light of the NPT's near absolute guarantee of the right to develop nuclear technology for peaceful purposes, the NPT Safeguards, constructed and administered by the International Atomic Energy Agency ("IAEA" or "Agency"), are necessarily constrained in order to maintain balance between the rights and obligations of the NNWS parties.[10] These constrictions highlight the critical importance of accurate and effective assessment of NPT compliance.

The international community faces a situation in which a state has been found to be in non-compliance with requirements of the nuclear non-proliferation regime.[11] International inspectors have chronicled an eighteen-year history of reporting violations and clandestine nuclear activities in Iran.[12] To many states these findings have led to

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from peaceful uses to nuclear weapons or other nuclear explosive devices").

7. *See id.* art. VI, 21 U.S.T. at 490, 729 U.N.T.S. at 173 (expecting all parties to the NPT "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race . . . and to nuclear disarmament").

8. *See id.* art. IV, 21 U.S.T. at 489, 729 U.N.T.S. at 172–73.

9. *See id.* art. III, 21 U.S.T. at 487–88, 729 U.N.T.S. at 172.

10. *Cf.* 2 SHAKER, *supra* note 5, at 728–46 (observing that the IAEA's verification activities were designed to respect the sovereign rights of states and not hamper the economic, scientific, or technological development of states parties to the NPT or international cooperation with nuclear activities for peaceful purposes).

11. *See also* John Burroughs, Executive Dir., Lawyers' Comm. on Nuclear Policy, The Iran Situation: Options for the Security Council, Remarks to Diplomats Representing Some Elected Members of the Security Council (May 2, 2006) (transcript available at http://www.lcnp.org/disarmament/iran.remarks-may2.htm) (indicating that Iran has engaged in a pattern of concealment of "extensive activities involving all aspects of the nuclear fuel cycle").

12. *See* The Director General, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, ¶ 4, *delivered to the Board of Governors*, IAEA Doc. GOV/2005/67 (Sept. 2, 2005) [hereinafter IAEA Doc. GOV/2005/67] (finding that Iran failed to report its possession, processing, and use of nuclear materials, and failed to declare the facilities in which it processed and

an absence of confidence in the exclusively peaceful nature of Iran's nuclear program.[13] Despite these findings and the concern that it is secretly pursuing nuclear weapons, Iran continues with its plans to develop an indigenous nuclear fuel cycle capability with impunity.[14]

This paper explores the legal limitations of the nuclear non-proliferation regime, examines the effects of these constrictions on the mechanisms for compliance assessment and enforcement, and uses this analysis as a backdrop for assessing the substantive legal issues pertaining to Iran's nuclear program. Compliance assessment under the NPT is a flawed process.[15] The problem of Iran is therefore a problem inherent in the NPT framework.[16] Only effective multilateralism will be sufficient to solve the crisis we face now and will face in the future.[17]

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stored the materials).

13. *See* William J. Broad & David E. Sanger, *New Worry Rises on Iranian Claim of Nuclear Steps*, N.Y. TIMES, Apr. 17, 2006, at A1 (suggesting that although Iran constantly asserted its abandonment of projects involving advanced nuclear technology, known as the P-2 centrifuge, Western analysts speculate that Iran maintains a second, secret program separate from its main nuclear facility in Natanz).

14. *See id.* (noting that Iran's pursuit of a sophisticated method of atomic fuel development, despite its claim that it is enriching only small amounts of uranium, has provoked surprise and concern by international nuclear inspectors, who say Iran may hasten its development of a nuclear weapon through the new method).

15. *See infra* Part II (discussing how verification and compliance assessment of the basic non-proliferation undertakings contained in Article III is not comprehensively provided for by the treaty).

16. *See infra* Part III (discussing that although the IAEA has chronicled an eighteen-year history of safeguard violations in Iran and has found that Iran's policy of concealment breaches its obligation to comply with the NPT, this breach of the NPT does not satisfy the criteria in the statute of the IAEA and Iran's Safeguards Agreement which allow the Agency to report the matter to the U.N. Security Council).

17. *See* Mohamed ElBaradei, Dir. Gen., IAEA, Statement at the Stanford University Center for International Security and Cooperation: In Search of Security: Finding an Alternative to Nuclear Deterrence (Nov. 4, 2004) *available at* http://www.iaea.org/NewsCenter/Statements/2004/ebsp2004n012.html (concluding that conflicts and threats to international security, including conflicts regarding the preservation of the environment "to ensuring respect for human rights, working for sustainable development, and controlling weapons of mass destruction," "can only be resolved through a collective and multilateral approach, in which competing interests and powers can be contained and harmonized").

I. ARTICLE II AND THE BASIC NON-PROLIFERATION OBLIGATION

The basic non-proliferation obligation assumed by NNWS parties under the NPT is to not acquire nuclear weapons.[18] This obligation is contained in Article II of the NPT, which states in full:

> Each non-nuclear-weapon State Party to the Treaty undertakes 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; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.[19]

The NPT envisions two general proliferation scenarios; the "transfer" of a nuclear weapon from one state to another, and the "manufacture" of a nuclear weapon.[20] Discussed below, the prohibitions in Article II comprehensively capture both scenarios. The drafters of the NPT intended for the obligations in Article II to be free of loopholes, but the NPT suffers from fundamental verification limitations and nonetheless contains one notable exception—allowing for nuclear sharing.[21]

The first clause of Article II obliges NNWS parties "not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or

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18. *See* NPT, *supra* note 4, art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

19. *Id.*

20. *See* 1 SHAKER, *supra* note 5, at 214 (stating that NWS parties agree "not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons" either directly or indirectly). NWS parties also agree not "to assist, encourage, or induce any [NNWS party] to manufacture or otherwise acquire nuclear weapons or other explosive devices, or control over such weapons or explosive devices." *Id.* In turn, NNWS parties agree "not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices." *Id.*

21. *See id.* at 215, 268 ("[O]ne serious loop-hole has been left open and that is the assistance in the manufacture of nuclear weapons or other nuclear explosive devices from [NNWS] Parties to the Treaty to [NNWS] not Parties to the Treaty.").

explosive devices directly, or indirectly."[22] This implies the transfer of a completed nuclear explosive device.[23] The transfer of disassembled components or materials intended for use in a nuclear weapon is handled by separate provisions.[24]

Despite the ostensibly categorical prohibition against the "transfer" of a nuclear weapon, Article II narrowly allows for nuclear sharing.[25] Such arrangements were prevalent in both the NATO and Warsaw pact alliances at the time the NPT was formulated. Nuclear sharing allows the stationing of nuclear weapons on the national territory of a NNWS party.[26] Although an argument can be made to the contrary, these arrangements are permissible under Article II, provided that the NNWS party does not exercise "control" over the weapon.[27] "Control," as it is used in this sense, applies to the independent ability to use a nuclear weapon.[28] Otherwise, the obligation "not to receive the transfer" of nuclear weapons applies to weapons that are both based on the national territory of the NNWS party and on the territory of another state.[29]

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22. NPT, *supra* note 4, art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

23. *See* 1 SHAKER, *supra* note 5, at 214–15.

24. *See* NPT, *supra* note 4, art. III, 21 U.S.T. at 487–88, 729 U.N.T.S. at 172 (stating that states parties agree not to provide "(a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material").

25. *See id.* art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171 (lacking a specific prohibition against NNWS parties' nuclear sharing with states not party to the NPT).

26. *See* 1 SHAKER, *supra* note 5, at 129 (providing that Articles II and III of the NPT arose out of lengthy bilateral negotiations between the United States and Soviet Union, which were undertaken to preclude the possibility of nuclear proliferation through military alliances under NATO). For example, the NPT does not address the arrangements for deployment of nuclear weapons within allied territory. *Id.* at 240.

27. *See id.* at 214–15 (stating that "control" is the key word in Articles I and II of the NPT and relating it to the problem of nuclear sharing arrangements within NATO).

28. *See id.* at 249 (noting that because NWS parties are proscribed from transferring control over nuclear weapons, NWS parties "cannot give up physical custody of their nuclear weapons (or other nuclear explosive devices) or provide sufficient access to them so that they could be taken away by anyone else; nor can the [NWS parties] give up their power to make the final decision on firing their nuclear weapons").

29. NPT, *supra* note 4, art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171; *see* 1 SHAKER, *supra* note 5, at 248–49.

The use of the term "other nuclear explosive devices" in conjunction with the term "nuclear weapons" throughout the NPT precludes states from acquiring a nuclear weapon by "legally" building a nuclear explosive for so-called peaceful purposes.[30] The drafters of the NPT recognized that there is no fundamental physical distinction between a nuclear explosive for peaceful or military use.[31] The NPT thus categorically bans the proliferation of all nuclear explosives, regardless of professed intent.

The second clause of Article II is the most problematic in terms of verification and compliance assessment. This provision obliges NNWS parties "not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices."[32] The terms "manufacture" and "acquisition" suggest a completed nuclear explosive device, similar to the first clause, as some negotiating parties had originally remarked.[33] If this interpretation is accepted, it would allow for the NNWS parties to construct all the parts of a nuclear explosive without assembling the finished device and still remain within the bounds of the NPT.[34]

Although such a narrow interpretation of "manufacture" is not accepted by the states parties, the lack of definitive criteria for what constitutes "manufacture" continues to be an issue in the context of compliance assessment.[35] During the 2005 NPT Review Conference

30. *See* NPT, *supra* note 4, art. III, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

31. *See* 1 SHAKER, *supra* note 5, at 203–04 (pointing out that delegates reasoned that "no State could develop a capability of detonating nuclear devices for peaceful purposes without also acquiring a capability of detonating nuclear weapons").

32. *See* NPT, *supra* note 4, art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171 (requiring NNWS parties to not "manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices").

33. *See* 1 SHAKER, *supra* note 5, at 250 (summarizing remarks from negotiating parties which stated that they could interpret the language as to not cover incomplete nuclear devices such as the "exploitation of uranium deposits, enrichment of uranium, extraction of plutonium from nuclear fuels, or the manufacture of fuel elements or heavy water when the processes are carried out for civil purposes").

34. *But see id.* at 250–51 (suggesting that constructing a prototype nuclear device or components that could only be used for the production of a nuclear explosive device would constitute "manufacture" under Article II of the NPT, although placing "a particular activity under safeguards" might help to remove suspicion of non-compliance).

35. *See id.* at 249–51 (discussing how states parties have differing views on

a U.S. diplomat noted, "[i]n an extreme case, an NPT party might have manufactured an entire mockup of the non-nuclear shell of a nuclear explosive, while continuing to observe its safeguards obligations on all nuclear material."[36] The U.S. diplomat suggested a list of activities of concern which would indicate an "intent" to manufacture a nuclear weapon in violation of Article II.[37] These activities include

> seeking certain fuel cycle facilities of direct relevance to nuclear weapons, such as enrichment or reprocessing, with no clear economic or peaceful justification; clandestine facilities and procurements; committing safeguards violations and failing to cooperat[e] with the IAEA to remedy them; and using denial and deception tactics to conceal nuclear-related activities.[38]

Despite the reasonable case for the need of criteria to assess compliance with Article II, the nature of nuclear energy, the balance of rights and obligations in the NPT, and the particular circumstance and purpose of any given nuclear program provide serious confounds to straight-forward compliance assessment. It is conceivable for a state to engage in the activities listed above without necessarily attempting to acquire nuclear weapons. For instance, the same fuel cycle facilities used in a civilian program, which all states are entitled to pursue under the NPT,[39] can be used in a weapons program.[40] A state may have many reasons to pursue nuclear

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what constitutes "manufacture" under Article II and on what is considered to be a violation of the prohibitions in Article II).

36. Jackie W. Sanders, Special Representative of the President for the Nonproliferation of Nuclear Weapons, U.S. Ambassador, Statement to the 2005 Review Conference of the Treaty on the Nonproliferation of Nuclear Weapons (May 19, 2005) (transcript available at http://www.state.gov/t/np/rls/rm/46557/htm).

37. *See id.* (arguing that regardless of whether a "safeguards violation" has occurred under Article III of the NPT, it is crucial to establish "whether all the facts of a case tend to point toward an intent to manufacture or acquire nuclear weapons").

38. *Id.*

39. *See* NPT, *supra* note 4, art. IV, 21 U.S.T. at 489, 729 U.N.T.S. at 172–73.

40. *See, e.g.*, Zachary R. Dowdy, *A Standoff Over Iran; Ahmadinejad's Continuing Defiance Over its Nuclear Efforts May Force the UN to Impose Sanctions*, NEWSDAY, Sept. 1, 2006, at A07 (stating that enriched uranium's nuclear energy can be used for "heating and other utilitarian purposes," but it may

programs, including the prestige gained from mastering an advanced technology and legitimate non-weapons military use such as naval propulsion, among many other conceivable reasons. Many state activities, such as defense and general welfare spending, can lack a strict economic justification from a critical outsider point of view, but such programs remain legitimate due to widespread domestic support and other subjective considerations.[41]

During the negotiation of the NPT, a rejected Russian draft of Article II included a prohibition against the "preparation" for the manufacture of a nuclear weapon.[42] Although the term "preparation" would have been subject to a similar problem of interpretation and verifiability, it would have nonetheless created a higher threshold of assurance against states seeking to legally acquire nuclear weapons capability.[43]

Despite the lack of a definitive interpretation of the term "manufacture," the prevailing interpretation of Article II is that the many activities a state must undertake to eventually construct a nuclear explosive, thereby indicating non-compliance with Article II, would necessarily involve violating specific provisions in Article III.[44] Specifically, nuclear weapons require fissile material,[45] which must be placed under safeguards.[46] As is discussed in the next section, despite the information a state must provide on its nuclear

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also be further refined to produce weapons-grade nuclear material with the potential to power a bomb).

41. *E.g.*, Henry L. Chambers, Jr. & Dennis E. Logue, Jr., *Separation of Powers and the 1995–1996 Budget Impasse*, 16 ST. LOUIS U. PUB. L. REV. 51, 55 (1996) (explaining that U.S. government spending is often based on political motives rather than strict economic justifications).

42. 1 SHAKER, *supra* note 5, at 249 (observing the Soviet draft language "envisaged the undertaking by the States 'not possessing nuclear weapons' not to 'prepare for the manufacture' of nuclear weapons").

43. *Id.* at 254.

44. *E.g.*, *id.* at 251 ("Neither uranium enrichment nor the stockpiling of fissionable material in connection with a peaceful program would violate Article II so long as these activities were safeguarded under Article III.").

45. For an explanation of the difference between fissile and fissionable material see International Panel on Fissile Materials, *Global Fissile Material Report 2006*, *available at* http://www.fissilematerials.org/ipfm/site_down/ipfmreport06.pdf.

46. *See* NPT, *supra* note 4, art. III.1, 21 U.S.T. at 488, 729 U.N.T.S. at 172 (requiring Article III safeguards on "all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere").

program pursuant to its safeguards,[47] compliance assessment in this regard can still be a highly subjective endeavor.

The third clause of Article II obliges NNWS parties "not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices."[48] The primary effect of this obligation is to allow states to adopt a cooperative approach to proliferation, independently acquiring or purchasing the particular components of a nuclear weapon from one or more other states.[49]

II. ARTICLE III AND THE SAFEGUARDS SYSTEM: COMPLIANCE ASSESSMENT AND ENFORCEMENT

Article III of the NPT does not provide a comprehensive mechanism for verification and compliance assessment of basic non-proliferation undertakings. The non-proliferation obligations it provides differ in their verifiability, or in the ability of the states parties to maintain confidence that all NNWS parties are in compliance with their obligations.[50] At the time the NPT was negotiated, it was believed to be impossible to detect the presence of a completed nuclear weapon that might have been clandestinely transferred from one state to another.[51] Therefore the verification component of the NPT contained in Article III is silent on the issue of the transfer of nuclear weapons from one state to another.[52]

A. VERIFICATION AND COMPLIANCE ASSESSMENT OF NON-PROLIFERATION IN ARTICLE III

The verification component of the NPT deals exclusively with the second proliferation scenario, where a state seeks to manufacture its

47. *See* Statute of the International Atomic Energy Agency art. IX.C, Oct. 26, 1956, 8 U.S.T. 1093, 1102–04, 276 U.N.T.S. 18–22 [hereinafter IAEA Statute] (requiring member states to notify the IAEA "of the quantities, form, and composition of special fissionable materials, source materials, and other materials").

48. NPT, *supra* note 4, art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

49. *See* 2 SHAKER, *supra* note 5, at 734.

50. *See* NPT, *supra* note 4, art. III, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

51. *See* 1 SHAKER, *supra* note 5, at 7.

52. *See* NPT, *supra* note 4, art. III.1, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

own nuclear weapon.[53] The safeguards provided for in the NPT only indirectly verify compliance with the obligation not to manufacture a nuclear weapon. Article III contains the safeguards provisions which form the backbone of verification and compliance assessment under the NPT.[54] These safeguards deal exclusively with the disposition of nuclear materials, creating a second set of obligations applicable only to NNWS parties.[55] Following from the issues highlighted above and the balance between rights and obligations inherent in the NPT, the safeguards provided for in Article III suffer from several limitations; including the scope of the verification mandate, uncertainty arising from limits in the technical capacity to draw safeguards conclusions, the lack of enforcement provisions, and the strong protections on the right of states to develop nuclear energy programs.[56]

The NPT Safeguards regime draws its authority from three overlapping and complementary sources; Article III of the NPT,[57] the Statute of the IAEA ("IAEA Statute"),[58] and the IAEA safeguards system. Article III.1 of the NPT contains the basic safeguards obligation for NNWS parties and delimits the scope of the safeguards.[59] Procedures for the safeguards are based on the IAEA Model Comprehensive Safeguards Agreement ("Safeguards Agreement"), devised by the IAEA for the exclusive purpose of fulfilling its role under the NPT.[60] The IAEA Statute defines the extent of the Agency's mandate and the procedures for verification and compliance enforcement.[61]

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53. *See id.*

54. *See id.*

55. *See id.* art. III.2, 21 U.S.T. at 488, 729 U.N.T.S. at 172 (prohibiting states parties from providing: "(a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this article").

56. *See* NPT, *supra* note 4, art. III, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

57. *See id.*

58. *See* IAEA Statute, *supra* note 47, 8 U.S.T. 1093, 276 U.N.T.S. 3.

59. *See* NPT, *supra* note 4, art. III.1, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

60. *See* Int'l Atomic Energy Agency [IAEA], *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 *Model Comprehensive Safeguards Agreement*].

61. *See* IAEA Statute, *supra* note 47, 8 U.S.T. 1093, 276 U.N.T.S. 3.

The provisions for safeguards are mandatory only to NNWS parties. The basic safeguards obligation is contained in Article III.1:

> Each non-nuclear-weapon State party to the Treaty undertakes to accept safeguards, as set forth in agreement to be negotiated and concluded with the International Atomic Energy Agency in accordance with the Statute of the International Atomic Energy Agency and the Agency's safeguards system, for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. Procedures for the safeguards required by this article shall be followed with respect to source or special fissionable material whether it is being produced, processed or used in any principal nuclear facility or is outside any such facility. The safeguards required by this article shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere.[62]

The objective and scope of the safeguards are restricted in a number of ways. As specified by the Article III.1, the "exclusive purpose" of safeguards is the "verification of the fulfillment of [a state's] obligations assumed under [the NPT] with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices."[63] The next clause refines the scope of the safeguards from the vague term "nuclear energy," to "all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere."[64]

B. THE SCOPE OF THE SAFEGUARDS REGIME UNDER THE NPT AND RESTRICTIONS THEREON

The scope of the IAEA safeguards system, restricted to nuclear materials, effectively places the non-nuclear components of a potential nuclear weapons program outside the purview of the

62. NPT, *supra* note 4, art. III.1, 21 U.S.T. at 488, 729 U.N.T.S. at 172.
63. *Id.*
64. *Id.*

Agency.[65] Absent a nexus to nuclear material, the Agency lacks the authority to conduct inspections or other verification activities.[66] Aspects of a suspected nuclear weapons program that fall outside the mandate of the safeguards agreement can include all the non-nuclear components that comprise a nuclear explosive, such as the chemical high-explosive packages all nuclear weapons require to detonate and delivery systems.

The objective of safeguards is further restricted by the IAEA safeguards system to:

> [T]he timely detection of diversion of significant quantities of *nuclear material* from peaceful nuclear activities to the manufacture of nuclear weapons or of other nuclear explosive devices or for purposes unknown, and deterrence of such diversion by the risk of early detection.[67]

In this respect the IAEA safeguards system contrasts with the term "preventing diversion" stated in Article III.1 of the NPT.[68] In application, safeguards measures do not equate to physical measures, which are not provided for by either the IAEA Statute or the IAEA's safeguards system.[69] In practice, prevention equates to the deterrent effect of safeguards against cheating behavior. According to this rationale, the risk of detection—and the subsequent possibility of being subject to enforcement action by the international community—deters a state from diverting nuclear materials to non-peaceful purposes.[70]

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65. *See Model Comprehensive Safeguards Agreement*, *supra* note 60.

66. *See* The Director General, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, ¶ 35, *delivered to the Board of Governors*, IAEA Doc. GOV/2006/27 (Apr. 28, 2006) [hereinafter IAEA Doc. GOV/2006/27] (observing that Iran's ability to confine the IAEA to the Safeguards Agreement limits and restricts "Agency access to activities not involving nuclear material").

67. *Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 28.

68. NPT, *supra* note 4, art. III, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

69. *See* 2 SHAKER, *supra* note 5, at 733.

70. *See* David S. Jonas, *Variations On Non-Nuclear: May the "Final Four" Join the Nuclear Nonproliferation Treaty as Non-Nuclear Weapon States While Retaining Their Nuclear Weapons?*, 2005 MICH. ST. L. REV. 417, 434 (noting that the NPT does not allow new NWS parties because by definition, a NWS party is "a state that exploded a nuclear device prior to January 1, 1967," which consequently eliminates a state's incentive to develop nuclear weapons).

In one circumstance safeguards procedures are binding on states not party to the NPT.[71] The export of fissionable material from a NPT state party must be safeguarded, regardless of destination.[72] Article III.2 provides that:

> Each State Party to the Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this article.[73]

Therefore, if a NPT state party exports fissionable material to a non-NPT state party, the nuclear material must remain under safeguard.[74] In practice, this necessitates the non-NPT recipient state to conclude a separate agreement with the IAEA for this purpose.[75]

The NPT expressly attempts to balance the rights and obligations of NNWS parties.[76] Article IV.1 provides that:

> Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty.[77]

Crucial to the remainder of this review, Article IV is interpreted to allow all states to develop the full nuclear fuel cycle without restriction.[78] Due to the nature of nuclear technology, any civilian

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71. *See* 2 SHAKER, *supra* note 5, at 734 (explaining that Article III.2 is binding on a state that is not party to the NPT, where the state is "self-sufficient in uranium but needs to import equipment to build reactors and reprocessing plants").

72. *See* NPT, *supra* note 4, art. III, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

73. *Id.* art. III.2, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

74. *See* 2 SHAKER, *supra* note 5, at 734.

75. *See id.*

76. *See* NPT, *supra* note 4, art. IV, 21 U.S.T. at 489, 729 U.N.T.S. at 172–73.

77. *Id.* art. III.1, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

78. *See* H.E. Rajmah Hussain, Ambassador and Resident Representative of Malaysia to the IAEA, Statement by the Non-Aligned Movement at the IAEA Board of Governors' Meeting (Feb. 2, 2006).

fuel cycle facility can be used directly for military purposes.[79] Thus any state pursuing an advanced nuclear fuel cycle capacity also attains the capacity to acquire a nuclear arsenal within a short timeframe.[80] The strong language in Article IV directly limits the scope of verification and enforcement measures permitted by the treaty, illustrated by Article III.3:

> The safeguards required by this article shall be implemented in a manner designed to comply with article IV of this Treaty, and to avoid hampering the economic or technological development of the Parties or international cooperation in the field of peaceful nuclear activities, including the international exchange of nuclear material and equipment for the processing, use or production of nuclear material for peaceful purposes in accordance with the provisions of this article and the principle of safeguarding set forth in the Preamble of the Treaty.[81]

These limitations, based on the sovereign right of states to technological development, lead to some of the apparent deficiencies in the verification regime. The "inalienable right" to technological development in Article IV only becomes forfeit for a NNWS party after a violation of Article II.[82] Further, violation and non-compliance with safeguards can lead to a forfeiture of Article IV rights only if those violations include diversion of materials to use in nuclear weapons.[83]

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79. *See* James Sterngold, *Iran Celebrates Uranium Enrichment; Experts Say Nuclear Step Means Tehran Is Serious, but Weapon Is Years Off*, SAN FRANCISCO CHRONICLE, Apr. 12, 2006, at A1 (explaining that a country can produce weapons-grade uranium by using the same process for civilian uranium on a much larger scale).

80. *See* Thomas B. Cochran, Natural Resources Defense Council, *Adequacy of IAEA's Safeguards for Achieving Timely Detection* 8 (Oct. 2–3, 2005) (presented at a conference *After Iran: Safeguarding Peaceful Nuclear Energy*).

81. NPT, *supra* note 4, art. III.3, 21 U.S.T. at 487, 729 U.N.T.S. at 172.

82. *Id.* art. IV.1, 21 U.S.T. at 489, 729 U.N.T.S. at 172. The "inalienable right" to develop peaceful nuclear energy must be in conformity with articles I and II of the NPT. *Id.*

83. *See id.* art. III, 21 U.S.T. at 489, 729 U.N.T.S. at 172–173 (noting that the accepted safeguards fulfill states parties' obligation "of preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices").

The balance between rights and obligations leads to difficult questions of accountability and enforcement within the NPT regime. Article III.1 provides that "[p]rocedures for the safeguards required by this article *shall be followed.*"[84] This language establishes that, in addition to the obligation to conclude safeguards, the *procedures for safeguards* are also binding on NNWS parties. The significance of these multiple obligations, in addition to the requirement that exported fissionable materials must remain under safeguards, is that it becomes possible for a state to be in non-compliance with its obligations under Article III without violating its basic obligations under Article II.[85] Due to the restricted scope and objective of the NPT Safeguards, violation or non-compliance with the obligations in Article III does not automatically equate to a violation of Article II.[86] Yet, the NPT only provides penalties for states that violate Article II.[87] Thus it is possible for a state to violate Article III with legal impunity, provided the violation is not connected to the development of a nuclear weapons program.

Article IV allows states to develop an industrial nuclear capacity up to the threshold of nuclear weapons status.[88] The necessity of maintaining balance between the rights and obligations of states parties presents great difficultly in matters of compliance assessment and enforcement. These concerns translate into an extensive gray area between peaceful and non-peaceful activities in circumstances of safeguards and NPT violations. Ultimately, the responsibility for compliance assessment and enforcement falls on the IAEA and NPT states parties. But where these bodies lack the legal authority or political will to act, responsibility falls on the U.N. Security Council as the guarantor of international peace and security.[89]

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84. *Id.* art. III.1, 21 U.S.T. at 487, 729 U.N.T.S. at 172.

85. *See id.* art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171 (stating the basic obligations of a state party to the NPT are not to receive nuclear weapons, not to manufacture nuclear weapons, and not to seek assistance in the manufacture of nuclear weapons).

86. *See* Burroughs, *supra* note 11 (emphasizing that the limitations of nuclear safeguards stem from the lack of a NPT governance structure).

87. *See* NPT, *supra* note 4, art. IV, 21 U.S.T. at 489, 729 U.N.T.S. at 172.

88. *See id.*

89. *See id.* art. III, 8 U.S.T. at 1095, 276 U.N.T.S. at 6–8 (stating that, in the event of disagreement, "the Agency shall notify the Security Council, as the organ bearing the main responsibility for the maintenance of international peace and

The limitations of the scope of safeguards highlight the importance of accurate compliance assessment of safeguards. For each state implementing safeguards, the IAEA annually certifies that no declared nuclear material has been diverted to military use.[90] The conclusion that no diversion has occurred provides verification that the state in question is in compliance with its basic safeguards obligation not to divert nuclear material for non-peaceful purposes.[91] Such a conclusion further indicates that the state is in compliance with its obligation under Article III of the NPT to apply and follow safeguards procedures.[92]

Under the NPT Safeguards, as it was originally devised, the IAEA lacks a mandate to detect the presence of undeclared nuclear activities.[93] However, the Additional Protocol, approved by the Board in 1997, allows the IAEA to collect local-area environmental samples from any site, regardless of whether it has been declared to the Agency in accordance with safeguards procedures.[94] The IAEA may also visit locations it specifies in order to conduct wide-area environmental samples.[95] By design, this expanded inspection capability allows the Agency to reasonably certify that there are no undeclared nuclear activities present in a given location.[96] The Agency acknowledges that in cases where substantial concealment has occurred, certifying the absence of undeclared nuclear activity could be a lengthy process.[97] However, it is the considered view of

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security").

90. *See* IAEA, *Annual Report for 2004*, at 62, IAEA Doc. GC (49)/5 (2005) [hereinafter *Annual Report 2004*].

91. *See* IAEA Statute, *supra* note 47, art. XII, 8 U.S.T. at 1107, 276 U.N.T.S. at 26 (stating that the Agency has the right to ensure that "diversion of materials for military purposes" does not occur).

92. *See* NPT, *supra* note 4, art. III.1, 21 U.S.T. at 487, 729 U.N.T.S. at 172.

93. *See id.*

94. *See* IAEA, *Model Protocol Additional to the Agreement(s) Between State(s) and the International Atomic Energy Agency for the Application of Safeguards*, art. 6(a), IAEA Doc. INFCIRC/540 (Sept. 1997) [hereinafter *Model Additional Protocol*].

95. *See id.* art. 5(c).

96. *See id.* art. 4(a)(i).

97. *See* David Sloss, *It's Not Broken, So Don't Fix It: The International Atomic Energy Agency Safeguards System and the Nuclear Nonproliferation Treaty*, 35 VA. J. INT'L L. 841, 856–861 (1995) (outlining steps of the lengthy special investigations process, which includes obtaining the state's permission for access to certain undeclared locations and referring disputes to the Board or an arbitral

the Agency that a rigorous and universally applied inspection routine should be sufficient to credibly ensure verification.[98]

For states that implement the Additional Protocol, the IAEA annually certifies the absence of undeclared nuclear materials or activities.[99] As the IAEA has remarked in its assessments of Iran's safeguards status, arriving at the initial conclusion that there are no undeclared nuclear activities takes a great deal of time for all states in any circumstance.[100] For example, North Korea's Additional Protocol entered into force prior to 1993, yet the IAEA concluded the absence of undeclared nuclear activities in North Korea for the first time in 2003.[101] As of the 2005 annual IAEA Safeguards Report, the IAEA has concluded the absence of undeclared nuclear activity in only twenty-four of the seventy states in which both the NPT Safeguards and the Additional Protocol are implemented.[102]

C. ENFORCEMENT MEASURES UNDER THE NPT

Measures for enforcement are notably lacking in the NPT, the safeguards system, and the IAEA Statute. There are no enforcement measures provided for in the NPT and no enumerated penalties for non-compliance.[103] As the only article that provides a possibility for sanctions within the NPT framework, Article IV stipulates that the rights of states to develop peaceful nuclear technology is contingent on their compliance with Articles I and II.[104] But the NPT lacks a standing executive body to oversee the implementation of the NPT and has no mechanism to assess compliance with its provisions.[105]

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tribunal where access is denied).

98. *See id.* at 860 (arguing that the NPT grants the IAEA far-reaching authority to inspect sites and that Director General Blix maintains that a state cannot refuse the IAEA from inspecting a site).

99. *See Annual Report 2004*, *supra* note 90, at 62.

100. *See* IAEA Doc. GOV/2005/67, *supra* note 12, ¶ 51.

101. *See* IAEA, *Annual Report 2003*, at 53, IAEA Doc. GC (48)/3 (2004).

102. *See* IAEA, *Safeguards Statement for 2005,* ¶¶ 1,8 (2006), *available at* http://www.iaea.org/OurWork/SV/Safeguards/es2005.pdf [hereinafter *Safeguards Statement for 2005*].

103. *See* Fred Kaplan, *The Real Nuclear Option*, SLATE MAGAZINE, May 3, 2005, *available at* http://www.slate.com/id/2117940 (arguing that a critical problem with the NPT is that it lacks a general enforcement clause).

104. *See* NPT, *supra* note 4, art. IV, 21 U.S.T. at 489, 729 U.N.T.S. at 172.

105. *But see* Richard L. Williamson, Jr., *Is International Law Relevant To Arms*

Thus, the matter of compliance enforcement falls to the states parties, which at present meet only every five years to review the implementation of the NPT.[106] Even if the parties to the Review Conferences were to take up the issue of enforcement, they would lack the tools to implement their judgments, such as the power to levy sanctions or to take police actions.[107]

Under the safeguards system and IAEA Statute, there are only limited enforcement measures the Agency may take in the event of non-compliance.[108] If a NNWS party is found to have diverted nuclear material for non-peaceful purposes, the Agency may

> direct curtailment or suspension of assistance being provided by the Agency or by a member, and call for the return of materials and equipment made available to the recipient member or group of members. The Agency may also, in accordance with article XIX, suspend any non-complying member from the exercise of the privileges and rights of membership.[109]

While these provisions might be an adequate guard against the misuse of nuclear materials provided under the auspices of the IAEA, they do not address the circumstances where a state has diverted nuclear material using indigenous materials and equipment, as was the case in North Korea.[110] These measures would thus be inadequate to stop a determined proliferator, who would be more likely to attempt to develop indigenous technology in secret, rather

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Control?: Hard Law, Soft Law, and Non-Law in Multilateral Arms Control: Some Compliance Hypotheses, 4 CHI. J. INT'L L. 59, 73–74 (2003) (claiming that although "[f]ormal systems of sanctions for noncompliance in the arms control field are rare," the NPT contains an "automatic sanction built into the treaty for parties that violate IAEA safeguards").

106. *See* NPT, *supra* note 4, art. VIII, 21 U.S.T. at 492, 729 U.N.T.S. at 173.

107. *See* Kaplan, *supra* note 103.

108. *See* IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107–08, 276 U.N.T.S. at 30 (indicating that the Board of Governors will first give an opportunity for "the recipient State or States to take fully corrective action within a reasonable time").

109. *Id.*

110. *See* Erik Raines, *North Korea: Analyzing the "New" Nuclear Threat*, 12 CARDOZO J. INT'L & COMP. L. 349, 365–68 (2004).

than use IAEA loaned material and equipment that would be monitored in accordance with the safeguards provisions.[111]

The IAEA Board of Governors ("Board") is the decision making body tasked with assessing compliance with the Safeguards Agreements and the IAEA Statute.[112] The Board's authority to report cases to the Security Council is found in Article XII.C of the IAEA Statute[113] and Article 19 of the Safeguards Agreement.[114] Article XII.C was originally intended to deal only with safeguards and safety compliance specifically involving Agency projects, for example an IAEA supplied reactor to produce medical isotopes operated with the assistance of the Agency.[115] This section begins:

> The staff of inspectors shall also have the responsibility of obtaining and verifying the accounting referred to in sub-paragraph A-6 of this article and of determining whether there is compliance with the undertaking referred to in sub-paragraph F-4 of article XI, with the measures referred to in sub-paragraph A-2 of this article, and with all other conditions of the project prescribed in the agreement between the Agency and the State or States concerned. The inspectors shall report any non-compliance to the Director General who shall thereupon transmit the report to the Board of Governors.[116]

This criteria and definition for non-compliance should not be confused with the criteria defined in Article 19 of the Safeguards Agreement.[117] Non-compliance, as it is defined under Article XII.C,

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111. *See id.* at 366–68.

112. *See* IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107–08, 276 U.N.T.S. at 30 (allowing the Board to "call upon the recipient State or States to remedy forthwith any non-compliance which it finds to have occurred"); *Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 19 (requiring the Board, in relation to verification of non-diversion, to "take account of the degree of assurance provided by the safeguards measures that have been applied and shall afford the State every reasonable opportunity to furnish the Board with any necessary reassurance").

113. *See* IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107, 276 U.N.T.S. at 30.

114. *See Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 19.

115. *See* IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107, 276 U.N.T.S. at 28–30.

116. *Id.*

117. *See Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 19

requires a finding that nuclear material provided for an Agency project has been diverted for military purposes,[118] violations of health and safety regulations,[119] or other violations of conditions of an Agency project.[120] This narrow definition does not include activities a state undertakes under its own initiative, such as the operation of power plants and fuel cycle facilities.

The NPT Safeguards compliance assessment mechanism is comprised of two components. The triggering clause, contained in Article 19 of the Safeguards Agreement, contains the criteria for findings of non-compliance.[121] The reporting clause, contained in Article XII.C of the IAEA Statute, contains the procedures for handling cases of non-compliance and the authority for reporting cases to the U.N. Security Council.[122]

As the triggering mechanism, Article 19 of the Safeguards Agreement grants the Agency authority to judge and enforce compliance with its provisions:

> [I]f the Board upon examination of relevant information reported to it by the Director General finds that the Agency is not able to verify that there has been no diversion of *nuclear material* required to be safeguarded under the Agreement to nuclear weapons or other nuclear explosive devices, it may make the reports provided for in paragraph C of Article XII of the [IAEA] Statute....[123]

(explaining that "if the Board . . . finds that the Agency is not able to verify that there has been no diversion of *nuclear material* required to be safeguarded under the Agreement to nuclear weapons or other nuclear explosive devices, it may make the reports provided for in paragraph C of Article XII of the Statute").

118. *See* IAEA Statute, *supra* note 47, arts. XI, XII, 8 U.S.T. at 1105, 1107, 276 U.N.T.S. at 26–28.

119. *See id.* art. XII.A, C, 8 U.S.T. at 1106–07, 276 U.N.T.S. at 26–28.

120. *See id.* art. XII.C, 8 U.S.T. at 1107, 276 U.N.T.S. at 28–30.

121. *See Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 19.

122. *See* IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107, 276 U.N.T.S. at 30 (describing the chain of command for reporting non-compliance). All reports begin with IAEA inspectors, who must report any non-compliance to the Director General; the Director General in turn reports the noncompliance to the Board; the Board is then responsible for reporting the non-compliance to all IAEA members, the Security Council, and the U.N. General Assembly. *Id.*

123. *Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 19.

Per its authority under the Safeguards Agreement, the Board may only report a state to the Security Council if it finds that, based on the report from the Director General, the Board cannot be assured that the state has not diverted nuclear material for non-peaceful purposes.[124] These provisions make clear that the only relevant consideration behind a finding of non-compliance in the context of safeguards is the diversion of nuclear materials for military purposes. Any other breach of the Safeguards Agreement can only amount to non-compliance as far as it affects the Board's ability to verify that there has been no diversion.

The language of the IAEA Statute entitles the Board to come to its own judgment, based on the information provided to it by the Director General, on whether it can be assured that no material has been diverted.[125] So it is conceivable that, although the Agency inspectors might not physically detect diverted materials or otherwise have their activities hindered by the target state, the Board may still find that it cannot be assured that no diversion has occurred. Thus the Board is not constrained to act or make findings consistent with what the Agency reports to it and may elect to report a case to the Security Council by a simple majority of members voting and present.[126]

On the matter of enforcement, the Board has very limited authority to respond proactively to actual or suspected cases of non-verification with the non-diversion of nuclear materials.[127] Under the NPT Safeguards:

> [I]f the Board, upon report of the Director General, decides that an action by the State is essential and urgent in order to ensure verification that nuclear material subject to safeguards under the Agreement is not diverted to nuclear weapons or

124. *See id.*

125. *See* IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107–08, 276 U.N.T.S. at 28–30 ("The Board shall call upon the recipient State or States to remedy forthwith any non-compliance which it finds to have occurred.").

126. *See* IAEA, *Provisional Rules of Procedure of the Board of Governors*, R. 37 (Feb. 23, 1989), http://www.iaea.org/about/policy/board/bgrules1/html [hereinafter *Provisional Rules*].

127. *See Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 18.

> other nuclear explosive devices the Board shall be able to call upon the State to take the required action without delay....[128]

However, this clause, allowing the Board to call upon a state to take action, is limited to instances when such action is deemed necessary to prevent the diversion of nuclear material. If a state fails to heed such a call, the Board is left to its own judgment, based upon the report of the Director General, to determine whether or not the Board is "able to verify that there has been no diversion of *nuclear material*."[129] In this instance, the Director General is likely to report the non-compliance to the Board. The Board, being unable to verify any lack of diversion, is obliged to report the matter to the U.N. Security Council pursuant to its authority under Article XII.C of the IAEA Statute.[130]

Separately, Article III.B.4 of the IAEA Statute empowers the IAEA to submit a report to the Security Council "if in connexion with the activities of the Agency there should arise questions that are within the competence of the Security Council,... as the organ bearing the main responsibility for the maintenance of international peace and security."[131] While this provision does not require a finding of non-compliance with safeguards, its proper application would naturally be interpreted in light of the Safeguards Agreement and other provisions of the IAEA Statute. Thus any basis other than diversion or uncertainty about diversion requires justification.

The Board has some innovative potential to enact coercive measures in response to cases of concern that do not involve diversion of nuclear materials. Specifically, in deciding whether to approve any request made by a member state for a technical cooperation project, the Board may consider any such matter it may deem relevant, a catch-all phrase that in effect leaves the matter entirely to the conceivably arbitrary judgment of the Board.[132] Though such a mechanism could easily be susceptible to political abuse, it gives the Board some leverage over member states by

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128. *Id.*
129. *Id.* ¶ 19.
130. IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107, 276 U.N.T.S. at 30.
131. *Id.* art. III.B.4, 8 U.S.T. at 1096–97, 276 U.N.T.S. at 8.
132. *Id.* art. XI.E.7, 8 U.S.T. at 1105, 276 U.N.T.S. at 26.

allowing it to obstruct a key membership privilege, provided it makes some justification that is reasonable enough to secure a majority vote.

In cases where a state has persistently violated the provisions of the Statute or conditions related to a project, but that do not involve diversion, it is also possible for Board to vote by simple majority to recommend for a state to have its member rights and privileges suspended.[133] In order to enact the suspension, the General Conference, consisting of the entire membership of the IAEA and which meets only once a year in the fall, would have to approve the measure by a two-thirds vote.[134]

III. IRAN: THE FINDING OF NON-COMPLIANCE WITH THE NPT

A. IAEA BOARD'S ADOPTION OF A RESOLUTION FINDING IRAN IN VIOLATION OF THE NPT SAFEGUARDS AGREEMENT

The Board adopted a resolution on September 24, 2005 finding "that Iran's many failures and breaches of its obligations to comply with its NPT Safeguards Agreement... constitute non compliance in the context of Article XII.C of the Agency's Statute."[135] Lacking the consensus by which the Board customarily makes its decisions, the United States, European Union ("E.U."), and E3 States (Britain, France, Germany), which lobbied for the adoption of this resolution, generated sufficient votes on the thirty-five member Board to adopt the resolution with a simple majority.[136] The vote broke down largely along North-South lines, with the majority of Non-Aligned states abstaining from the vote.[137] As a surprise to many analysts, India, a

133. *Id.* art. XIX.B, 8 U.S.T. at 1111, 276 U.N.T.S. at 36–38.

134. *Id.*

135. IAEA, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran: Resolution Adopted on 24 September 2005*, art. 1, IAEA Doc. GOV/2005/77 (Sept. 24, 2005) [hereinafter IAEA Doc. GOV/2005/77].

136. *See Provisional Rules*, *supra* note 126, R. 37.

137. For (22): Argentina, Australia, Belgium, Canada, Ecuador, France, Germany, Ghana, Hungary, India, Italy, Japan, Republic of Korea, Netherlands, Peru, Poland, Portugal, Singapore, Slovenia, Sweden, UK, USA. Against (1): Venezuela. Abstaining (12): Algeria, Brazil, China, Mexico, Nigeria, Pakistan, Russia, South Africa, Sri Lanka, Tunisia, Vietnam. *See* SHARON SQUASSONI,

long time ally of Iran, voted in favor of the resolution, a likely indication of the heightened priority of its strengthening bilateral ties with the United States.[138]

The language of the Board's finding is not consistent with the relevant provision of the IAEA Statute. Operative paragraph 1 of the resolution finds Iran's past breaches of its NPT Safeguards, as detailed in a two-year old Agency report, to "constitute non-compliance in the context of Article XII.C of the Agency's Statute."[139] Noted above, a finding of non-compliance, as the term is used in Article XII.C, pertains to circumstances when nuclear material provided in an Agency project has been diverted for military purposes, health and safety violations, or any other condition of an Agency project proscribed by agreement.[140] Although Iran has several ongoing projects of the IAEA, including assistance in preparations for the nuclear power plant at Bushehr, the IAEA has not accused Iran of diverting nuclear material from any project.[141] Nor has Iran been accused of any safety and health violations or of any other infraction of any condition stipulated in any agreement pertaining to an IAEA project. Therefore, the finding of non-compliance made by the Board is vague and has no basis in the IAEA Statute.

Moreover, the IAEA resolution did not find Iran to be in non-compliance with its NPT mandated Safeguards Agreement.[142] The IAEA has chronicled an eighteen-year history of safeguards violations in Iran, finding that Iran's policy of concealment "resulted

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IRAN'S NUCLEAR PROGRAM: RECENT DEVELOPMENTS, CRS REPORT FOR CONGRESS Order Code RS21592, at 5 n.17 (2006).

138. *See id.*

139. IAEA Doc. GOV/2005/77, *supra* note 135, art. 1.

140. *See* IAEA Statute, *supra* note 47, art. XII.C, 8 U.S.T. at 1107, 276 U.N.T.S. at 28–30.

141. *See* Paul Kerr, *IAEA Presses Iran to Comply With Nuclear Safeguards*, ARMS CONTROL TODAY, July/Aug. 2003, *available at* http://www.armscontrol.org/act/2003_07-08/iran_julaug03.asp (observing Iran's efforts to build a further nuclear power plant at Bushehr and the IAEA's concern over Iran's lack of reporting nuclear material; however, the IAEA's statement "stop[ped] short of saying that Iran is in violation of [the IAEA's] safeguards agreement," which ensures that member states do not divert peaceful civilian nuclear programs for military purposes).

142. *Id.*

in many breaches of its obligation to comply with [its Safeguards] Agreement."[143] But this finding does not satisfy the criteria in the Safeguards Agreement allowing for the Agency to report the matter to the U.N. Security Council. Iran's Safeguards Agreement provides that the Board may report a matter to the Security Council only if it finds that, based on the report from the Director General, the Board "is not able to verify that there has been no diversion of nuclear material required to be safeguarded under this Agreement."[144]

Puzzlingly the Board resolution did not cite this report or more recent IAEA reports on Iran's nuclear program, but rather cited a two-year report dated November 10, 2003.[145] The Director General reported in November 2004, for the first time since beginning its investigation in Iran, that "all the declared nuclear material in Iran has been accounted for, and that such material is not diverted to prohibited activities."[146] Moreover, the Board's resolution does not assert any uncertainty regarding the diversion of nuclear materials.[147] Previous Board findings of non-compliance have come in the face of active and ongoing non-cooperation with IAEA inspections, preventing the Agency from judging whether nuclear material had been diverted to military use.[148]

This was the basis for the Board referral of the North Korean situation to the Security Council on February 12, 2003.[149] In its

143. The Director General, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, ¶ 107, *delivered to the Board of Governors*, IAEA Doc. GOV/2004/83 (Nov. 15, 2004) [hereinafter IAEA Doc. GOV/2004/83].

144. IAEA, *Text of the Agreement Between Iran and the Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, art. 19, IAEA Doc. INFCIRC/214 (Dec. 13, 1974) [hereinafter *Iran Safeguards Agreement*].

145. *See* IAEA Doc. GOV/2005/77, *supra* note 135, art. 1 (citing IAEA Doc. GOV/2003/75).

146. IAEA Doc. GOV/2004/83, *supra* note 143, ¶ 112.

147. *See* IAEA Doc. GOV/2005/77, *supra* note 135, art. 2 (failing to specifically assert a finding of diversion to non-peaceful purposes, but finding an "absence of confidence that Iran's nuclear programme is exclusively for peaceful purposes").

148. *See* IAEA, *Report by the Director General on the Implementation of the Resolution Adopted by the Board on 6 January 2003 and of the Agreement Between the IAEA and the Democratic People's Republic of Korea for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, ¶¶ 1, 9–10, *delivered to the Board of Governors*, IAEA Doc. GOV/2003/4 (Jan. 22, 2003).

149. *See* IAEA, *IAEA Board of Governors Adopts Resolution on Safeguards in*

resolution, the Board reported that "as provided for in Article XII.C. of the Statute, through the Director General, the DPRK's non-compliance and the Agency's inability to verify non-diversion of nuclear material subject to safeguards, to all Members of the Agency and to the Security Council and General Assembly of the United Nations."[150]

Despite the dissonance between the Board's findings and the criteria in the Safeguards Agreement for reporting Iran to the Security Council, the Board's decision relied on a novel legal basis. The resolution separately found that the "absence of confidence that Iran's nuclear programme is exclusively for peaceful purposes ha[s] given rise to questions that are within the competence of the Security Council."[151]

Noted above, the finding of non-compliance rested in Article XII.C, whereas a finding of non-compliance and Security Council referral under the Safeguards Agreement requires the diversion of nuclear material to military purposes.[152] Failing to meet this criterion for Security Council referral under the Safeguards Agreement, the Board utilized the broader language of Article III.B.4 of the IAEA Statute.[153] Although there is evidence that this provision was originally intended to be utilized in the context of the application of safeguards, a broad interpretation allows the Board to circumvent the narrow reporting clause contained in the Safeguards Agreement.[154]

North Korea, (Feb. 12, 2003), *available at* http://www.iaea.org/NewsCenter/MediaAdvisory/2003/med-advise_048.shtml.

150. *Id.* ¶ e.

151. IAEA Doc. GOV/2005/77, *supra* note 135, art. 2; *see also* IAEA Statute, *supra* note 47, art. III.B.4 (allowing the IAEA to submit reports to the U.N. Security Council for issues within the Security Council's competence).

152. *Iran Safeguards Agreement*, *supra* note 144, art. 19 (allowing the Board, if it "finds that the Agency is not able to verify that there has been no diversion of nuclear material required to be safeguarded under this Agreement, . . . [to] make the reports provided for in paragraph C of Article XII of the Statute of the Agency").

153. *See* IAEA Statute, *supra* note 47, art. III.B, 8 U.S.T. at 1096, 276 U.N.T.S. at 8.

154. *See* DAVID FISCHER, HISTORY OF THE INTERNATIONAL ATOMIC ENERGY AGENCY: THE FIRST FORTY YEARS 37 (1997) (stating that the reporting requirement under Article III.B.4 was proposed by the Soviet Union specifically to allay its concern that the application of the safeguards could raise international security issues).

In light of the circumstances of this non-compliance finding, there arise questions as to its legal implications and significance. Iran was not found to be in non-compliance with its Safeguards Agreement as there has been no diversion of nuclear material to non-peaceful purposes.[155] This also means that the IAEA has not made any findings that bear on Article II of the NPT. Yet Article III of the NPT provides that safeguards procedures "*shall be followed.*"[156] Thus Iran has violated its obligations under the NPT.

Yet, despite ongoing suspicion regarding Iran's intentions, these violations have not risen to the level where an argument can be made that Iran has forfeited it rights under Article IV. The Non-Aligned states in particular have sought to uphold the rights of NNWS parties under Article IV.[157] At the meeting of the Board on February 2, 2006 the Non-Aligned Movement stated "that any rightful nuclear activity under the Agency's safeguard does not constitute any concern."[158] This attitude reflects the present legal and political reality of the nuclear non-proliferation regime. States parties are unable to take action, even in the face of egregious violations and non-compliance, unless there is evidence of a weapons program.[159] Thus, the February 2006 finding of the IAEA has little impact on Iran's rights under Article IV of the NPT.

B. IAEA INVESTIGATION INTO IRAN'S COMPLIANCE WITH THE SAFEGUARDS AGREEMENT AND DECLARATIONS

There are two additional, but related, substantive issues that bear on Iran's legal obligations under the NPT and its Safeguards

155. *See* IAEA Doc. GOV/2004/83, *supra* note 143, ¶¶ 112–13.

156. NPT, *supra* note 4, art. III.1, 21 U.S.T. at 488, 729 U.N.T.S. at 172.

157. *See* Hussain, *supra* note 78, ¶ 3.

158. *Id.* ¶ 12.

159. *See* The Director General, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, ¶ 54, *delivered to the Board of Governors*, IAEA Doc. GOV/2006/15 (Feb. 27, 2006) [hereinafter IAEA Doc. GOV/2006/15] (stating that the investigation into the scope of the purpose of Iran's nuclear program goes beyond the "formal legal requirements of the Safeguards Agreement and Additional Protocol" and can only continue effectively with Iran's cooperation); *see also* Hussain, *supra* note 78, ¶¶ 9, 14 (asserting that with the finding of no diversion of nuclear materials to prohibited activities, that "any request for additional legal authority" on behalf of the IAEA for ongoing issues in Iran must be negotiated by Member States).

Agreement. The first is the IAEA's finding that it is not yet "in a position to conclude that there are no undeclared nuclear materials or activities in Iran."[160] The second is the ongoing IAEA investigation into discrepancies in Iran's past activities and declarations.[161] These two outstanding issues have been subject to varying interpretations. Hawks in Washington take the position that the IAEA has not been able to confirm the absence of a military nuclear program in Iran after three years.[162] More cautious observers state, at the very least, that this indicates Iran's nuclear file has not been given a clean bill of health by the IAEA.[163] Either way, the implication, stronger or weaker depending on the observer, is that Iran must or might be hiding a weapons program. Both these viewpoints are misleading.

Noted above, the objective of NPT Safeguards is limited to "the timely detection of diversion of significant quantities of *nuclear material* from peaceful nuclear activities" to unknown use or use in weapons.[164] The IAEA certifies annually that no declared nuclear material has been diverted to military use.[165] Such a conclusion certifies that the state in question is in compliance with its NPT Safeguards obligations to not divert material to non-peaceful purposes. In the case of Iran, the IAEA concluded in its November

160. IAEA Doc. GOV/2006/15, *supra* note 159, ¶ 53.

161. *See* The Director General, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, ¶¶ 3–12, *delivered to the Board of Governors*, IAEA Doc. GOV/2005/87 (Nov. 18, 2005) (outlining the IAEA's ongoing investigation of Iran's past enrichment experiments, which included analyzing environmental samples, and the discrepancies in Iran's documentation of these experiments).

162. *E.g.*, Paul Leventhal, Founding President, Nuclear Control Inst., Statement at the National Press Club on Iran's Nuclear Program (Sept. 16, 2005) (transcript available at http://www.nci.org/05nci/PLpressconferencestatement.htm) (arguing that despite three years of investigation, there are still unanswered questions regarding possible ongoing secret nuclear activities in Iran, and such activities "have to be assumed to be weapon-related").

163. *See* Paul Kerr, *Iran's Nuclear Efforts, Capabilities Still Murky*, ARMS CONTROL TODAY, Apr. 1, 2006, at 27 ("evidence of an Iranian nuclear weapons program remains largely circumstantial").

164. *Model Comprehensive Safeguards Agreement*, *supra* note 60, ¶ 28.

165. *See* IAEA, *The Safeguards System of the International Atomic Energy Agency*, ¶¶ 29–30, *available at* http://www.iaea.org/OurWork/SV/Safeguards/safeg_system.pdf [hereinafter *The Safeguards System*] (explaining that the process of annual certification is based on the accounting, containment, and surveillance of nuclear material).

2004 report that all declared nuclear materials had been accounted for and therefore none had been diverted to military purposes.[166] The IAEA reached this same conclusion in September 2005.[167]

The IAEA certifies the absence of undeclared nuclear activities only for states that implement the Additional Protocol.[168] The IAEA has stated this process will take longer in Iran due to its history of concealed nuclear activities.[169] The IAEA statement that it is "not yet in a position to conclude that there are no undeclared nuclear materials or activities," which was true for Iran, as of the IAEA Safeguards Statement covering 2005, was also true for 45 other states and Taiwan including the Czech Republic and South Africa.[170] These two states in particular are notable because they have had additional protocols in force longer than Iran and also operate nuclear facilities on their territory.[171]

Due to its eighteen-year history of concealed nuclear activities,[172] Iran is a special case. However, this non-official quasi status does not confer any technical rationale for interpreting IAEA conclusions differently than for any other state. In general, the inability to conclude the absence of undeclared nuclear activity is caused by an absence of evidence, which must be meticulously determined from samples collected over a wide area, and in the case of Iran, over a very large territory. The obstruction of the verification process, for instance by a state restricting the activities of IAEA inspectors, could

166. *See* IAEA Doc. GOV/2004/83, *supra* note 143, ¶ 112.

167. *See* IAEA Doc. GOV/2005/67, *supra* note 12, ¶ 51.

168. *See The Safeguards System*, *supra* note 165, ¶ 46 (explaining that "[a] more extensive evaluation is performed for each State with a comprehensive safeguards agreement after its additional protocol enters into force . . . [which] includes findings related to an initial conclusion about both the non-diversion of declared nuclear material and the absence of undeclared nuclear material and activities").

169. *See* IAEA Doc. GOV/2005/67, *supra* note 12, ¶ 51.

170. *Safeguards Statement for 2005*, *supra* note 102, ¶¶ 14–15.

171. *See* IAEA, *Non-Proliferation of Nuclear Weapons & Nuclear Security: IAEA Safeguards Agreements and Additional Protocols*, at 14 (May 2005) (listing the IAEA's Board of Governors approval of additional protocols for the Czech Republic in 1999 and South Africa in 2002). Iran's additional protocol was not approved until 2003. *Id.*

172. *See* IAEA Doc. GOV/2005/67, *supra* note 12, Annex 1 (providing that Iran began its secret plutonium separation experiments in 1987); *see also id.* ¶ 13 (stating that Iran's past clandestine activities related to acquiring centrifuge technology began in 1987 and continues to be investigated by the IAEA).

constitute non-compliance for states implementing the Additional Protocol only if the Board were to find that it could not be assured that no diversion has occurred.

For some it is tempting to declare, based on the inability of the IAEA to presently draw a conclusion on the absence of nuclear activities, that Iran continues to operate concealed facilities and that any such facilities must be for a military program. However, the IAEA has cautioned that the lack of a conclusion does not imply suspicion of undeclared nuclear materials and activities.[173] In order to reach such a conclusion the IAEA must also take into account the history of concealment and the nature of the declared program as a whole. Therefore, the resolution of outstanding issues related to the investigation into Iran's past concealed activities is critical to the Agency's ability to determine the absence of undeclared materials and activities, as will be shown in the next section. Beyond determining that no undeclared activities exist, the IAEA's investigation into Iran's past concealed activities is essential for the restoration of confidence in Iran's nuclear program.

Despite the absence of formal legal authority granted by the Additional Protocol, the IAEA continues to probe into several outstanding issues relating to discrepancies in Iran's declarations of past activities. Of these several outstanding issues, the most important relate to high enriched uranium ("HEU") and low enriched uranium ("LEU") contamination and the acquisition of P1 and P2 centrifuge technology.[174] In addition, the Agency continues to examine the issue of a document that describes the casting of uranium metal into hemispheric shapes, which would be necessary for developing a bomb.[175] The IAEA also continues to investigate

173. *See* Leventhal, *supra* note 162 (restating an assertion by IAEA Director General Mohamed ElBaradei that there is no evidence to support claims that Iran is working on a nuclear weapons program).

174. *See* IAEA Doc. GOV/2006/15, *supra* note 159, ¶ 48.

175. *See id.* ¶ 20 (stating that Iran showed the Agency documents that contained, among other information, "centrifuge enrichment related drawings, specifications and supporting documentation provided by the intermediaries . . . [and procedures] for the casting of enriched and depleted uranium metal into hemispheres, related to the fabrication of nuclear weapon components").

discrepancies between its analysis and Iran's declarations of its past plutonium experiments.[176]

The more troublesome matter, HEU contamination, has largely been resolved. The IAEA noted in November 2005 that its analyses of the contamination "tend, on balance, to support Iran's statement about the foreign origin of most of the observed HEU contamination."[177] The IAEA continues to investigate the origin of LEU and some HEU particles, but it is unlikely that additional analysis will reveal anything more than additional foreign contamination, or at worst, a few additional uranium enrichment experiments. Regardless, IAEA Director General Mohamed ElBaradei has indicated that it will be impossible to definitively locate all sources of LEU contamination, thus necessitating greater transparency from Iran on the history of its centrifuge program, above and beyond Iran's formal legal requirements.[178]

The Agency continues to investigate the history of Iran's uranium enrichment program.[179] Specifically, Iran has failed to produce documentation relating to the acquisition of P-1 centrifuge components during the mid 1990s.[180] Iran previously stated that due to the clandestine nature of its supply network, a single handwritten document, which it had turned over to the IAEA, is the only documentation it possesses.[181] As of its current report, the IAEA still awaits documentation relating to the shipment of this purchase.[182]

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176. Iran conducted plutonium separation experiments between 1988 and 1993, which resulted in the production of 100mg of plutonium. The IAEA continues to investigate when the plutonium separation took place by analyzing new plutonium solution samples taken in 2004. *See* IAEA Doc. GOV/2004/83, *supra* note 143, ¶¶ 72–78; *see also* IAEA Doc. GOV/2006/15, *supra* note 159, ¶ 26 (listing the series of actions the IAEA undertook to clarify the nature and scope of these experiments, which included meeting with Iranian officials).

177. IAEA Doc. GOV/2005/67, *supra* note 12, ¶ 12.

178. *See* IAEA Doc. GOV/2006/27, *supra* note 66, ¶¶ 8–9.

179. *See* IAEA Doc. GOV/2006/15, *supra* note 159, ¶¶ 15–16 ("Iran has been requested to provide further clarification of the timing and purpose of certain trips taken by AEOI staff members in the mid-1990s.").

180. *See id.* ¶ 16 (referring specifically to 500 sets of P-1 centrifuge components); *see also* IAEA Doc. GOV/2006/27, *supra* note 66, ¶ 11 (noting that while Iran showed the document to the Agency, Iran refused requests to furnish a copy of the document).

181. *See* IAEA Doc. GOV/2006/15, *supra* note 159, ¶ 12 (denying specifically the existence of written evidence "such as meeting minutes, administrative

The IAEA has also requested documentation related to the alleged procurement of P-2 centrifuge components between 1995, when it acquired the designs, and 2002.[183] Iran claims that it did not work on the centrifuges during this period.[184] The IAEA has recently confronted Iran with documents related to work allegedly carried out by a contracting company between 2002 and 2003 and the import of centrifuge components.[185]

As of its latest report, the IAEA is examining the additional information Iran supplied to the IAEA on this matter.[186] Although Iran is not required to report the import of centrifuge components under either its Safeguards Agreement or the Additional Protocol, it is obligated, under the Additional Protocol, to provide the IAEA with such information upon the request of the Agency.[187]

Only one outstanding issue has a direct implication on Article II. The IAEA continues to be concerned about the revelation of a document found in Iran describing the procedures for reducing uranium gas into metal forms in small quantities and shaping the metal into hemispheric shapes.[188] The purpose of such a procedure would almost certainly be for military use. The IAEA has noted that since Iran acquired the document in the late 1980s it does not appear

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documents, reports, personal notebooks or the like").

182. *See* IAEA Doc. GOV/2006/27, *supra* note 66, ¶ 11.

183. *See* IAEA Doc. GOV/2006/15, *supra* note 159, ¶¶ 18–19 (providing that Iran continues to state that foreign intermediaries did not deliver P-2 centrifuge components to Iran and that it did not build P-2 centrifuges during the period of 1995 to 2002).

184. *See id.* ¶ 18 (remarking that "Iran continues to assert that no work was carried out on P-2 centrifuges . . . and that at no time during this period did it ever discuss with the intermediaries the P-2 centrifuge design, or the possible supply of P-2 centrifuge components").

185. The IAEA inquired about the alleged import to a contracting company of 900 magnets from a foreign entity in mid-2003, to which Iran replied only a limited number of magnets were delivered. Iran is not required to report the import such components under either its Safeguards Agreement, *Iran Safeguards Agreement*, *supra* note 144, of the Additional Protocol, *Model Additional Protocol*, *supra* note 94, but is obligated under the Additional Protocol to provide the IAEA with such information upon the request of the Agency. IAEA Doc. GOV/2006/27,, *supra* note 66, ¶19.

186. *See* IAEA Doc. GOV/2006/27, *supra* note 66, ¶ 13.

187. *See Model Additional Protocol*, *supra* note 94, art. 2(a)(ix)(b).

188. *See* IAEA Doc. GOV/2006/27, *supra* note 66, ¶¶ 15–16.

to have ever used any of the procedures described.[189] The latest report mentions that although Iran has allowed the IAEA to examine the document, it continues to decline to give the Agency a copy.[190] The IAEA notes that it has seen the same document in other member states, likely other beneficiaries of the A.Q. Khan network, such as Libya.[191]

The IAEA has indicated that the existence of the document makes Iran's cooperation on the development of its P-1 program even more crucial, although it has noted there has been no indication that Iran has made use of the procedures described in the document.[192] It is therefore incumbent upon Iran to be as transparent as possible in order to help allay the fears over its nuclear intentions. The IAEA's treatment of this issue strongly indicates that the document itself is of little relevance on its own, despite the political mileage against Iran that U.S. Ambassador John R. Bolton has gotten out of it. Consistent with the positions Director General ElBaradei has taken in similar issues in this case, his concern regarding the uranium metal document addresses how it affects international confidence in Iran's program rather than its value as evidence of a weapons program.

The IAEA has stated it will be in a position to conclude that there are no undeclared nuclear materials or activities in Iran only by obtaining a full understanding of the development and extent of the centrifuge program.[193] Therefore, the history of Iran's enrichment program is of critical importance to the IAEA's continued legal authority to pursue this line of inquiry. Yet the IAEA can only continue to work towards a conclusion if Iran applies the Additional Protocol *and* fulfills the requests of the Agency above its legal requirements.

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189. *See id.* ¶ 16.

190. *See id.* ¶¶ 15–16.

191. *See id.* ¶ 16 (asserting that the IAEA has knowledge that intermediaries and other member states possessed the Iranian document at issue).

192. *See* IAEA Doc. GOV/2006/15, *supra* note 159, ¶¶ 20–22; *see also Diplomacy and Force:Interview: The United Nations' Top Inspector is Prepared to Issue a Report on Iran's Nuclear Program that Will 'Reverberate Around the World'*, NEWSWEEK, Jan. 23, 2006, *available at* http://www.iaea.org/NewsCenter/Transcripts/2006/newsweek12012006.html. Here the IAEA Director General reiterates that there has been no indication of a military nuclear program in Iran, although he is not in a position to exclude this possibility.

193. *See* IAEA Doc. GOV/2006/27, *supra* note 66, ¶¶ 33–34.

The authority of the IAEA to conduct an investigation into Iran's nuclear past is inseparable from its expanded mandate under the Additional Protocol. In other words, the sole technical purpose of the ongoing investigation is to allow the IAEA to be in a position to draw a conclusion under the Additional Protocol that no undeclared nuclear activities or materials exist in Iran.[194] Following the February 4, 2006 decision of the IAEA to report the Iran dossier to the U.N. Security Council, Iran reportedly suspended its voluntary implementation of the Additional Protocol, which it has signed but not ratified.[195] Absent the implementation of the Additional Protocol, the finding made in November 2004 that no diversion has occurred, remains the Board's central conclusion regarding Iran's safeguards compliance.[196]

C. THE SUSPENSION OF FUEL CYCLE ACTIVITIES

On March 28th, 2006 the President of the Security Council issued a statement on behalf of the Council calling upon Iran to:

> [T]ake the steps required by the IAEA Board of Governors, notably in the first operative paragraph of its resolution GOV/2006/14, which are essential to build confidence in the exclusively peaceful purpose of its nuclear programme and to resolve outstanding questions, and underlines, in this regard, the particular importance of re-establishing full and sustained suspension of all enrichment-related and reprocessing activities, including research and development, to be verified by the IAEA.[197]

The statement "calls upon Iran to take the steps needed to begin building confidence . . . by fully complying with the requirements set

194. *See id.* ¶ 35.

195. *See* IAEA, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran: Resolution Adopted on 4 February 2006*, ¶¶ (f)–(g), IAEA Doc. GOV/2006/14 (Feb. 4, 2006) [hereinafter IAEA Doc. GOV/2006/14]; *see also* IAEA Doc. GOV/2006/15, *supra* note 159, ¶ 31 (outlining Iran's refusal to continue voluntary implementation of the Additional Protocol).

196. *See* IAEA Doc. GOV/2006/14, *supra* note 195, ¶ 2.

197. President of the U.N. Security Council, Statement on Non-proliferation on Behalf of the Security Council, U.N. Doc. S/PRST/2006/15 (Mar. 29, 2006) [hereinafter Statement on Non-proliferation].

out by the IAEA Board."[198] It describes as requirements the series of measures identified in the February IAEA Board resolution, specifically the re-establishment of "full and sustained suspension of all enrichment-related and reprocessing activities," and reconsideration of the construction of a heavy water research reactor.[199]

The statement refers to these confidence building measures as requirements. However, operative paragraph 5 of the February Board resolution refers to these measures as "voluntary, and non legally binding," in accordance with previous requests by the Board.[200] Operative paragraph 1 of that resolution notes "that outstanding questions can best be resolved and confidence built in the exclusively peaceful nature of Iran's programme by Iran responding positively to the calls for confidence building measures which the Board has made on Iran, and in this context deems it necessary."[201] The paragraph, which lists the measures identified in the present draft elements, does not use the language of requirement.[202]

Operative paragraph 2 "[r]equests the Director General to report to the Security Council . . . that these steps are required."[203] However, the Board does not possess the authority to implement such a request. The Board may call on Iran to take urgent action if it decides, pursuant to Article 18 of Iran's Safeguards Agreement, that such action "is essential and urgent in order to ensure verification that nuclear material . . . is not diverted to nuclear weapons or other nuclear explosive devices."[204] But the February Board resolution makes clear that the steps required of Iran are for the purpose of confidence building, not for assurance against diversion.[205]

Prior to September 2005, the Board had requested Iran to maintain suspension of all uranium enrichment related activities as a

198. The Lawyers' Comm. on Nuclear Policy, Inc., *The Iran Nuclear Dilemma Draft Elements: Points and Recommendations*, Mar. 20, 2006, *available at* http://www.lcnp.org/disarmament/draftelements_mar06.pdf.
199. Statement on Non-proliferation, *supra* note 197.
200. IAEA Doc. GOV/2006/14, *supra* note 195, ¶ 5.
201. *Id.* ¶ 1.
202. *See id.*
203. *Id.* ¶ 2.
204. *Iran Safeguards Agreement*, *supra* note 144, art. 18.
205. *See* IAEA Doc. GOV/2006/14, *supra* note 195, ¶ 1.

voluntary, non-legally binding, confidence building measure, pending the outcome of all outstanding issues related to the IAEA investigation.[206] In the present draft elements, suspension of enrichment related activities is no longer linked to the outcome of the IAEA investigation.[207] The Security Council has positioned itself to make suspension a matter of contention removed from authority of the IAEA to apply and verify safeguards.

When Iran's pattern of concealment of nuclear activities came to light in 2003,[208] a reasonable case could have been made that Iran should have been denied the right to pursue enrichment or reprocessing capabilities until it regained the trust of the international community. However that was not the path taken. Instead, the E.U. undertook negotiations with Iran intended to achieve "objective guarantees that Iran's nuclear programme is exclusively for peaceful purposes" and to "equally provide firm guarantees on nuclear, technological and economic cooperation and firm commitments on security issues."[209]

Iran agreed to suspend its uranium enrichment and conversion activities as a "voluntary confidence building measure and not a legal obligation" to be maintained throughout the duration of negotiations.[210] The Paris Agreement contains no enforcement mechanism and only grants the IAEA legal authority to verify its implementation. In the lead-up to the September 24, 2005 finding of "non-compliance" by the Board, the United States claimed that the justification of the finding of non-compliance was the resumption of

206. *See* IAEA, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran and Related Board Resolutions: Resolution Adopted on 11 August 2005*, ¶ (d), IAEA Doc. GOV/2005/64 (Aug. 11, 2005).

207. *See* IAEA Doc. GOV/2006/14, *supra* note 195, ¶ 1.

208. *See* The Director General, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, ¶ 32, *delivered to the Board of Governors*, IAEA Doc. GOV/2003/40 (June 6, 2003) [hereinafter IAEA Doc. GOV/2003/40] ("Iran has failed to meet its obligations under its Safeguards Agreement with respect to the reporting of nuclear material, the subsequent processing and use of that material and the declaration of facilities where the material was stored and processed.").

209. IAEA, *Communication Dated 26 November 2004 Received From the Permanent Representatives of France, Germany, the Islamic Republic of Iran and the United Kingdom Concerning the Agreement Signed in Paris on 15 November 2004*, at 4, IAEA Doc. INFCIRC/637 (Nov. 26, 2004).

210. *Id.* at 3.

uranium conversion, in violation of the suspension under the Paris Agreement.[211]

Under the Paris Agreement negotiating framework "the E3/EU recognize Iran's rights under the NPT exercised in conformity with its obligations under the Treaty, without discrimination"—a phrase that generally allows for uranium enrichment.[212] Presumably, Iran would have been free to resume such activities following the final outcome of negotiations. However, in Spring 2005, the E3/EU changed its position, declaring that the only objective guarantee would be the absence of enrichment.[213] Moreover, the E.U., in a proposal made several days after a deadline agreed to by the parties, demanded very firm commitments from Iran on forfeiting aspects of its nuclear program in exchange for a weak and nebulous package of incentives.[214] Notably, there were no security guarantees of any weight, which is not surprising since the United States was not directly involved in the discussions.[215]

For its part, Iran had offered to accept an extremely intrusive safeguard and verification regimen, far beyond what is required by the Additional Protocol. Iran's March 23, 2005 offer to the E.U. included the "[c]ontinuous on-site presence of IAEA inspectors" at its nuclear fuel cycle sites, ceilings on the level of enrichment, limiting the extent of its fuel cycle to only the needs of its power reactors, and binding national legislation prohibiting the development of nuclear weapons.[216] In Iran's estimation these

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211. *See id.* ("To build further confidence, Iran has decided, on a voluntary basis, to continue and extend its suspension to include all enrichment related and reprocessing activities, and specifically . . . all tests or production at any uranium conversion installation.").

212. *Id.*

213. *See* IAEA, *Communication Dated 8 August 2005 Received From the Resident Representatives of France, Germany and the United Kingdom to the Agency*, IAEA Doc. INFCIRC/651 (Aug. 8, 2005) (expressing disappointment over Iran's future uranium conversion and requesting Iran not to proceed).

214. *See id.*

215. *See* Paul Ingram, *Preliminary Analysis of E3/EU Proposal to Iran*, (British American Sec. Info. Council, 2005) (Occasional Paper of International Security Policy), *available at* http://www.basicint.org/pubs/Notes/BN050811-IranEU.htm ("The E3/EU do not seem to have had the courage to offer either the substantial, detailed incentives or a creative, compromise solution on enrichment which could reasonably have been expected to receive Iran's endorsement.").

216. IAEA, *Communication Dated 1 August 2005 Received From the*

provisions would have been sufficient to objectively guarantee the peaceful nature of its nuclear program.[217] However, as a necessary condition to maintain the support of the United States in the negotiating effort, the only objective guarantee acceptable to the E3 states is the complete cessation of all fuel cycle activities in Iran.[218]

The Paris Agreement is not a binding treaty. The text contains no expression that the states parties consent to be bound by the Agreement's terms. The Agreement also lacks the language that confers binding legal status unto treaties, such as provisions for ascension, ratification, and deposit.[219] The Agreement is analogous to a memorandum of understanding or a statement of principles that is used to guide a framework for continued negotiations.[220] The stated outcome of this negotiations process could conceivably take the form of a treaty. Therefore a violation of the Paris Agreement represents nothing more than a breakdown in negotiations.

Negotiations under the Paris Agreement and the suspension of fuel cycle activities are not required for the resolution of the remaining verification issues. The outcome of these talks deals specifically with aspects of civilian nuclear industries, recognized as a sovereign right under Article IV.[221] They bear no direct relation to Iran's obligations under the NPT or IAEA Safeguards Agreement. Therefore, the violation of any term of the Paris Agreement cannot be construed to

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Permanent Mission of the Islamic Republic of Iran to the Agency, at 3, IAEA Doc. INFCIRC/648 (Aug. 1, 2005).

217. *See id.* (arguing that the proposal "has the potential of providing a framework in which concerns of all sides are reasonably allayed").

218. *See* Condoleezza Rice, U.S. Dep't of State, Press Conference on Iran (May 31, 2006) (transcript available at http://www.state.gov/secretary/rm/2006/67103.htm).

219. *See* Vienna Convention on the Law of Treaties arts. 11–17, May 23, 1969, 1155 U.N.T.S. 331 (enumerating the requirements that characterize a treaty as legally binding).

220. *See, e.g.*, Memorandum of Understanding Relating to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems of May 26, 1972, Sept. 26, 1997, *available at* http://www.dod.mil/acq/acic/treaties/abm/ad_mou.htm.

221. *See* NPT, *supra* note 4, art. IV, 21 U.S.T. at 487, 729 U.N.T.S. at 172 (concluding that "[n]othing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty").

have any legal impact on the implementation of Iran's Safeguards Agreement.

The issue of suspension is somewhat of a red herring with no relation to Iran's obligations under the NPT. The IAEA view is that a pilot scale enrichment facility in Iran poses no nuclear weapons proliferation concern.[222] Moreover, Iran remains several years away, at best, from being in the position to begin constructing an industrial scale enrichment capability.[223] While the suspension or cessation of fuel cycle activities might help reduce international tension on this matter, it is not necessary for the completion of the IAEA investigation. In its latest safeguards report the IAEA made the unusual effort to stress that "safeguards obligations and confidence building measures are different, distinct and not interchangeable."[224] The report further states that "[t]he implementation of confidence building measures" that have been the focus of U.N. Security Council action "is no substitute for the full implementation at all times of safeguards obligations."[225] The IAEA thus suggests that the confidence building measures are not as important as the safeguards, which are meant to prevent the diversion of nuclear materials to military use.

In the same paragraph the IAEA states:

> In this context, it is also important to note that the Agency's safeguards judgments and conclusions in the case of Iran, as in all other cases, are based on verifiable information available to the Agency, and are therefore, of necessity, limited to past and present nuclear activities. The Agency cannot make a judgment about, or reach a conclusion on, future compliance or intentions.[226]

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222. *See* Michael Spies, Lawyers' Comm. on Nuclear Policy, *Undeclared Nuclear Activities and Outstanding Issues: Clean Bill of Health?*, May 2006, *available at* http://www.lcnp.org/disarmament/iran/undeclared.pdf.

223. *See* William J. Broad et al., *Analysts Say a Nuclear Iran Is Years Away*, N.Y. TIMES, Apr. 13, 2006, at A1 (estimating that Iran is at least five to ten years away from being able to produce its first nuclear weapon).

224. IAEA Doc. GOV/2006/27, *supra* note 66, ¶ 36.

225. *Id.*

226. *Id.*

The subtext of this statement is that while Iran may be in full compliance with its safeguards obligations, states can still point to its activities as revealing dubious intentions. Although it is not mentioned, such suspicions are inherent in the utilization of nuclear energy. Thus Iran's critics will always be able to say that Iran's nuclear program *could* be for weapons, despite whatever conclusions the Agency derives.

CONCLUSION

There are tendencies, especially in Washington, to regard Iran's development of a nuclear program as extremely urgent.[227] While there certainly are important issues at stake, with respect to Iran and to the non-proliferation regime generally, the urgency is overstated. If Iran makes the political decision to acquire a nuclear weapon, U.S. governmental and non-governmental analysts believe Iran would need a minimum of three to five years in order to produce sufficient HEU for a single weapon. The Director of U.S. National Intelligence, John Negroponte, recently stated that he believes Iran could develop a nuclear weapon between 2010 and 2015, up to ten years away.[228] There remains time for all sides to work toward a mutually acceptable diplomatic solution.

Beyond the issue of Iran's nuclear program, there remains the issue of the unchecked proliferation of nuclear fuel cycle technology, specifically protected by Article IV of the NPT.[229] Regarding this concern, the U.S. National Security Strategy states that America's "first objective requires closing a loophole in the Non-Proliferation

227. *See* David Albright & Corey Hinderstein, *Iran's Next Steps: Final Tests and the Construction of a Uranium Enrichment Plant*, Jan. 12, 2006, http://www.isis-online.org/publications/iran/irancascade.pdf (enumerating the United States' specific concerns, which include Iran's "plans to resume all its activities to build, research, develop, and test the P-1 centrifuge," its "resumed enrichment related activities," its "statements minimizing the significance of its actions," its "plans to install centrifuges [. . .] in the underground buildings of the main Fuel Enrichment Plan," and the possibility that it could assemble its first nuclear weapon by 2009).

228. *See* John D. Negroponte, Dir. of Nat'l Intelligence, Statement at the National Press Club on Intelligence Reform (Apr. 20, 2006) ("it is still a number of years off before [Iran is] likely to have enough fissile material to assemble into or put into a nuclear weapon, perhaps into the next decade").

229. *See* NPT, *supra* note 4, art. IV.1, 21 U.S.T. at 487, 729 U.N.T.S. at 172.

Treaty that permits regimes to produce fissile material that can be used to make nuclear weapons under cover of a civilian nuclear power program."[230]

The leaders responsible for closing this "loophole" have been the industrialized powers, notably those who operate nuclear fuel cycles facilities and either possess nuclear weapons or allow them to be housed on their national territories. The challenge for these states, which resist divulging their own nuclear options, is that closing the loophole requires chipping away at one of the core pillars of the NPT. Many developing and Non-Aligned states, which have been generally more supportive of Iran's position, are wary of accepting additional constraints on the development of nuclear technology, absent demonstrable progress on nuclear disarmament issues. The 2005 NPT Review Conference failed largely because the majority of states feel insufficient progress has been made toward the total elimination of nuclear weapons.[231] Despite progress cited by the NWS parties, there has been only lackluster implementation of some provisions agreed to in the outcome document of the 2000 Review Conference. Indeed, the conference required two and a half weeks just to agree on how it should refer to the 2000 Disarmament Obligations.

Recognizing the inextricable link between nuclear energy and nuclear weapons, states could use Iran's nuclear program as momentum to work toward the multilateral arrangements called for by the IAEA Director General ElBaradei. His proposal asks all states to work toward "multilateral control over the sensitive parts of the nuclear fuel cycle—enrichment, reprocessing, and the management and disposal of spent fuel."[232] Pending the establishment of multilateral control of the fuel cycle, all construction of enrichment and reprocessing facilities would be voluntarily suspended, and Iran and other states would be given credible nuclear supply assurances.

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230. NAT'L SEC. COUNCIL, *supra* note 1, at 20.

231. *See* Press Briefing, Press Conference on Non-Proliferation Treaty, (May 27, 2005), *available at* http://www.un.org/News/briefings/docs/2005/NPTpc050527.doc.htm (reporting that the President, Sergio de Queiroz Duarte, stated that "very little had been accomplished" when asked to provide his general assessment of the outcome of the Conference).

232. Mohamed ElBaradei, *supra* note 17.

Movement towards a proliferation-resistant global nuclear fuel cycle can only be accomplished in a balanced and nondiscriminatory way, accompanied by a concerted effort to expand use of energy sources not dependent on nuclear energy or fossil fuels.

The general debate of the 60th session of the U.N. First Committee on International Security and Disarmament concluded amid a chorus of "frustration," "disappointment," and "concern" over the failure of the NPT Review Conference and World Summit to achieve consensus on nuclear non-proliferation and disarmament. The lack of forward movement on both these fronts, coupled with the eighth consecutive year of deadlock in the Conference on Disarmament and the second consecutive failure of the U.N. Disarmament Commission to agree on an agenda, jeopardizes non-proliferation efforts. The vast majority of states continue to view the thirteen steps agreed to in the final document of the 2000 NPT Review Conference and the unequivocal undertaking decided upon in 1995 as essential actions for progress on critical non-proliferation goals.[233]

Following a year of disappointing non-proliferation and disarmament developments, U.N. Secretary General Kofi Annan stated:

> [W]e cannot continue to lurch from crisis to crisis, until the regime is buried beneath a cascade of proliferation. Twice last year, Governments had the chance to strengthen the foundations of the NPT regime, by agreeing on more robust IAEA inspections; incentives and guarantees for countries to forgo enrichment and reprocessing of fissile materials; and energetic steps to meet disarmament commitments. Both times, they failed. We cannot afford any more such squandered chances.[234]

233. *See* G.A. Res. 60/72, ¶ 4, U.N. Doc. A/RES/60/72 (Jan. 11, 2006) (urging parties to continue the implementation of nuclear disarmament obligations from the 1995 and 2000 Review Conferences).

234. Kofi Annan, Sec'y Gen., United Nations, Address to the United Nations Association of the United Kingdom: Statesmanship, Confidence-Rebuilding Required For U.N. Capable of Coping with Today's Crises, U.N. Doc. SG/SM/10332 (Jan. 31, 2006).