

PROJECT ON MANAGING THE ATOM

PROLIFERATION ALERT!

THE IAEA AND NON-COMPLIANCE REPORTING

TREVOR FINDLAY



HARVARD Kennedy School

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His monograph, *IAEA Safeguards Through a Cultural Lens: Power, Planning, and Habit*, will be published by Belfer later in 2015. In addition he is writing a book on the IAEA and global nuclear crises.

PREFACE

This study is a product of the Project on Managing the Atom (MTA), the first in a series of reports on the work of the International Atomic Energy Agency (IAEA) funded by the Carnegie Corporation of New York from 2013–2015. Research for the project involved documentary study, analysis of IAEA reports, interviews with current and former IAEA personnel, and consultations with government officials and academics.

In conducting the research I have had assistance from three enthusiastic young MTA interns: Nate Sands, who conducted a masterful textual analysis of IAEA non-compliance reports and compiled the chart on the corpus of non-compliance reports; Kate Miller, who compiled the acronym list, helped with the bibliography and proof-reading, and produced the chart showing non-compliance reporting trends; and Aurora Lachenauer, who also helped finalize the bibliography and proof-read the final draft for publication. The Iraq case study relies on document gathering and analysis by Derek De Jong, a student research assistant at the Canadian Centre for Treaty Compliance at Carleton University in 2005. My colleagues at MTA, Joshua Anderson, Matthew Bunn, Martin Malin, and Nickolas Roth, were unfailingly helpful and supportive. Two of my MTA Research Fellow colleagues, Ahsan Butt and Rachel Whitlark, and Executive Editor for the Belfer Center Studies in International Security book series, Karen Motley, were constant sources of encouragement as we all struggled to complete our various major time-bound projects.

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Notwithstanding all the generous assistance I received from many quarters, the views and analysis in the report are my responsibility alone.

Finally, I am grateful to the Belfer Center for Science and International Affairs and its Director Graham Allison for a wonderful four years as Research Fellow (later Senior Research Fellow) with MTA and the International Security Program, led by Steve Miller. I was intellectually nourished, inspired, challenged, and stimulated in ways that will have a lasting effect on my work and life.

TREVOR FINDLAY
Cambridge, October 2015

LIST OF ACRONYMS

AEA	Atomic Energy Authority [Egypt]
AEOI	Atomic Energy Organization of Iran
AP	Additional Protocol
AVLIS	atomic vapor laser isotope separation
BOG	Board of Governors
CANDU	Canada Deuterium Uranium (reactor)
CNS	Convention on Nuclear Safety
CSA	Comprehensive Safeguards Agreement
CTBT	Comprehensive Test Ban Treaty
CTBTO	Comprehensive Test Ban Treaty Organization
DDG	Deputy Director General
DG	Director General
DPRK	Democratic People's Republic of Korea
DU	depleted uranium
E3	European 3 (France, Germany, and the United Kingdom)
E3+3	European 3 plus China, Russia, and the United States
E3/EU+3	European 3/EU plus China, Russia, and the United States
EU	European Union
EU3	European Union 3 (France, Germany and the United Kingdom)
EXPO	Office of External Relations and Policy Coordination
FFCD	Full, final and complete declaration (Iraq)
HEU	highly-enriched uranium
IAEA	International Atomic Energy Agency
ICAO	International Civil Aviation Organization
ICC	Iraq Coordination Committee
INVO	Iraq Nuclear Verification Office
JCPOA	Joint Comprehensive Plan of Action (Iran)
KAERI	Korea Atomic Energy Research Institute
KANUPP	Karachi Nuclear Power Plant

KEDO	Korean Peninsula Energy Development Corporation
LOF	location (of nuclear materials) outside facilities
MNSR	Miniature Neutron Source Reactor
NAM	Non-Aligned Movement
NGO	Non-Governmental Organization
NPT	Non-Proliferation Treaty
OMV	ongoing monitoring and verification
OPCW	Organization for the Prohibition of Chemical Weapons
P5	permanent five (members of the United Nations Security Council)
PIV	physical inventory verification
PMD	Possible Military Dimensions
RSAC	Regional system of accounting and control
ROK	Republic of Korea
R&D	Research and Development
SAGSI	Standing Advisory Group on Safeguards Implementation
SIR	Safeguards Implementation Report
SQP	Small Quantities Protocol
SLC	State-level concept
SRD	shipper/receiver difference
SSAC	State system of accounting and control
SSC	significant safety concerns
STA	Safeguards Transfer Agreement
STR	Safeguards Technical Report
UAE	United Arab Emirates
UN	United Nations
UNDSS	UN Department of Safety and Security
UNGA	UN General Assembly
UNMOVIC	UN Monitoring, Verification and Inspection Commission
UNSC	UN Security Council
UNSCR	UN Security Council Resolution

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EXECUTIVE SUMMARY

Non-compliance with nuclear non-proliferation undertakings needs to be treated seriously: monitoring, verification, transparency, and accountability and full cooperation by the state concerned are all key components of the response.

Each of the non-compliance cases that the International Atomic Energy Agency (IAEA) has confronted to date have been unique, dynamic, and non-linear. None have conformed to the straight-forward trajectory envisaged in the IAEA Statute. The absence of statutory detail and guidance in safeguards agreements, combined with a reluctance by member states to clarify precisely what constitutes non-compliance, has obliged the IAEA Secretariat to be innovative and flexible.

The Secretariat's reporting on non-compliance with IAEA safeguards has increased in complexity and intensity since the first case, that of Iraq, arose in 1991 and has been made more demanding by the appearance of overlapping and linked non-compliance cases, a phenomenon also not envisaged in the Statute.

Political controversy has attended the handling of every non-compliance case. This is inevitable given that the ultimate judgement on non-compliance is taken by the Board of Governors representing governments with divergent interests and allegiances. Because non-compliance with non-proliferation obligations will continue to be an urgent concern of the international community, and the IAEA's handling of such cases is central to preventing the spread of nuclear weapons, the agency's performance is of paramount importance. The following observations and recommendations are offered to help to improve that performance. This report emphasizes the need for flexibility, a clear division of roles, training, transparency, resources, and strong leadership.

Key Recommendations

- The safeguards non-compliance process, despite the challenges, cannot be rendered machine-like and automatic: The IAEA must always have room to offer diplomatic, technical, and other creative solutions that may not have been foreseen by the Agency's founders and continuing practitioners. Long-standing debates over what constitutes non-compliance are unlikely to be resolved by carefully crafted definitions or guidance. Every such attempt will, when it comes to implementation, be

dogged by interpretive difficulties. This is especially likely in the marginal cases where non-compliance is not blatant but ambiguous, suspicious but not damning. The Secretariat and Board need continuing flexibility in determining what characterizes non-compliance and how to respond to it.

- The Secretariat must preserve its apolitical, neutral, and technical reputation. The decision taken by the Secretariat in 2003 to no longer consider itself bound to use the term “non-compliance” in each instance is a good one. It reinforces the principle that it is the Board of Governors that must take responsibility for declaring a state to be in non-compliance, based on the evidence and analysis presented to it by the Secretariat. As long as the Secretariat reports the case accurately, with the necessary caveats and the most credible technical data and analysis available, the non-compliance system should function well.
- Despite the technical detail involved, the non-compliance process is an intensely human one involving interactions between international civil servants and representatives of governments. This fact reinforces the vital importance of well-recruited and professionally trained Secretariat staff, a diplomatically skilled Director General, and well-informed Governors led by an astute chair.
- In addition to publicizing details of the most egregious non-compliance cases, the IAEA should be more transparent about all states’ compliance with their safeguards obligations. For too long the troubling record of some states has been swept under the rug of general assessments of “safeguards implementation.” A good start would be to publicly release the annual Safeguards Implementation Report (SIR). The SIR should also be improved by expanding analysis of the data provided and by giving more detail of individual states’ performance. While the principle of safeguards confidentiality should be respected, it should not be a sacred cow that stands in the way of holding states to account.
- Member states should ensure that the Agency has cutting-edge verification technology and analytical tools, first-rate professional and support staff, and generous funding to enable it to handle increasingly complicated non-compliance cases.
- Leadership is key. In choosing the Director General, member states need to be conscious that he or she is the public face of the Agency in a non-compliance crisis, the “reporter in chief” and the principal interlocutor with the Board and Security Council. Choosing a politically and diplomatically astute Director General, who is willing and able to take full advantage of the experience, technical skills and advice of the Secretariat, while balancing the various interests of member states and other stakeholders, is vital.

Implications for the Iran Deal

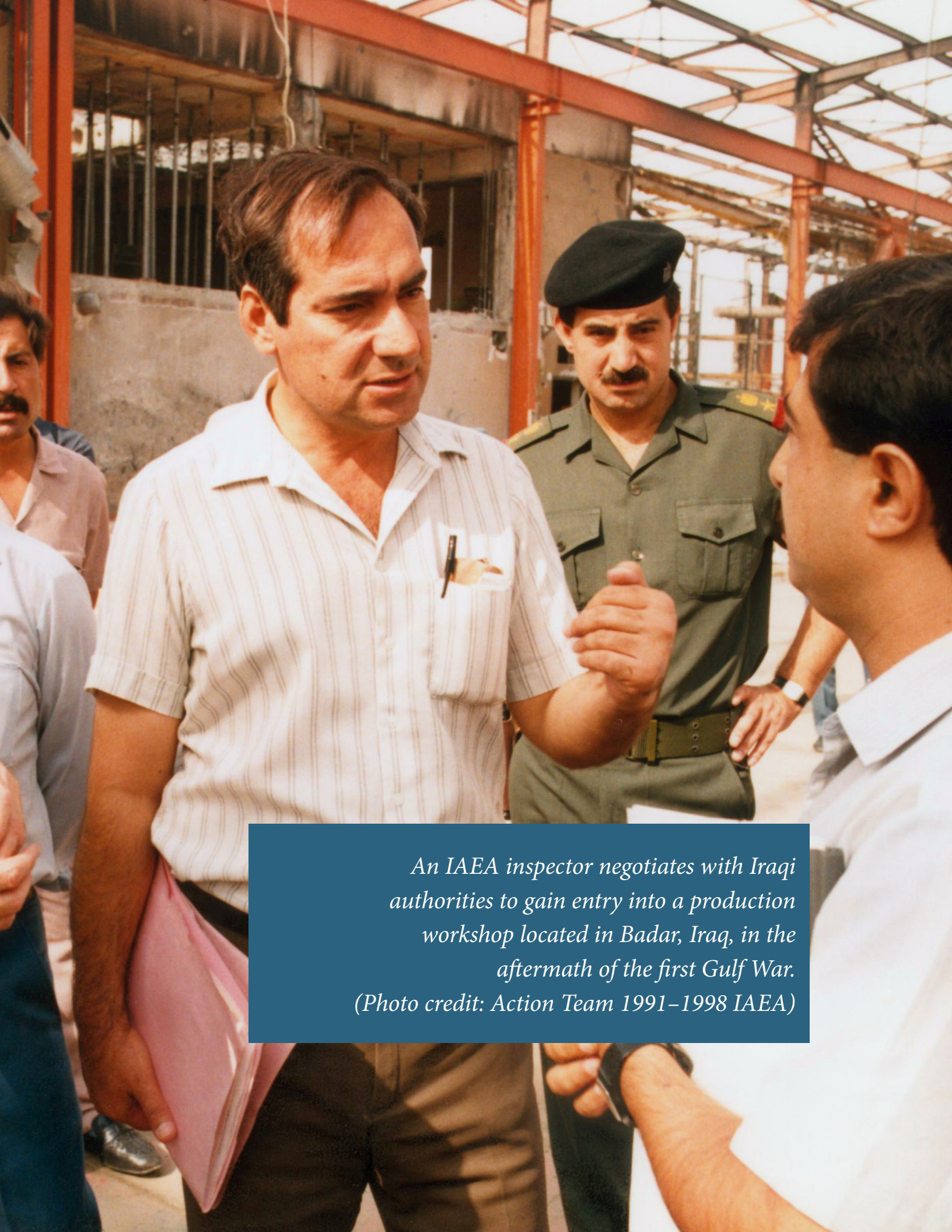
The Joint Comprehensive Plan of Action (JCPOA) of July 2015 imposes unprecedented non-compliance reporting obligations on the IAEA and provides the Agency with unparalleled access to and information on Iran. The Agency is charged with reporting on Iran's compliance with: additional safeguards obligations, including under an Additional Protocol; with a "roadmap" to resolve questions about Possible Military Dimensions of Iran's past nuclear activities; and, most importantly, with new measures designed to constrain Iran's current and future uranium enrichment and plutonium production.

To successfully carry out this mandate, member states and the IAEA should consider the following recommendations:

- The Agency needs as soon as possible to obtain the state-of-the-art verification technology promised in the JCPOA; the additional personnel and funding that the Director General has requested for enhanced verification in Iran; and the best analytical and report-crafting skills it can muster.
- As past cases have shown, both the Director General and the Board need to be allowed flexibility in handling the complexities of non-compliance issues, notably in navigating the line between inadvertent, "technical" non-compliance and systematic, willful non-compliance.
- It is the responsibility of the Board and the Security Council to declare Iran in non-compliance (if this occurs), based on evidence and analysis presented by the Director General, and to take the necessary action.
- Care must be taken to coordinate IAEA operations with the Joint Commission to be established under the JCPOA to avoid the Commission usurping the role of the Director General and the Board in the verification and compliance process.

Ultimately Iran's compliance with the JCPOA will depend on whether it has made a strategic decision to do so. If Iran decides to provide grudging cooperation, undertakes minimal compliance, constantly tests the boundaries of non-compliance, and overall seeks to "game" the system, no amount of finely crafted, technically competent, and politically astute non-compliance reporting by the IAEA Secretariat and Director General will suffice to avoid a crisis. If Iran takes the same path as Libya there may be uncertainties, minor disputes, or inadvertent non-compliance, but none of this will

be unresolvable. Iran would be wise to work closely with the Agency in facilitating its compliance, if that is its intent, and err on the side of providing as much information and access as possible in order to build confidence in its full compliance—at the IAEA, among other parties to the JCPOA, and in the broader international community.



An IAEA inspector negotiates with Iraqi authorities to gain entry into a production workshop located in Badar, Iraq, in the aftermath of the first Gulf War. (Photo credit: Action Team 1991–1998 IAEA)



INTRODUCTION

In theory, the way in which non-compliance with multilateral disarmament, arms control, and non-proliferation agreements is to be handled is straightforward. An autonomous, impartial technical body, comprising international civil servants and experts, monitors and verifies compliance. On discovering non-compliance this body reports to a governing body, representing states party to the agreement, which decides whether non-compliance has occurred. If warranted, that body takes whatever steps are necessary to redress the situation, including reporting the case to a higher authority, usually the UN Security Council, for possible action, including sanctions.

This is about all the detail that most disarmament, arms control, and non-proliferation agreements contain. Compared to the wealth of detail devoted to monitoring and verification, there is typically a dearth of guidance about how non-compliance is determined and what happens if a state party is suspected of non-compliance, or is caught in the act. States are reluctant to spell out the possible stages of a non-compliance case and its consequences in advance and would rather leave the matter vague.

Sovereignty is a paramount concern. States are generally loath to submit themselves to international jurisdiction in any field, but are particularly sensitive about national security. In spelling out non-compliance processes and consequences, states are aware not just that these might be applied to other states, but that they also might be applied to themselves. Governments are always nervous about frivolous, malicious, or retaliatory non-compliance accusations. Another reason for skittishness about non-compliance mechanisms is that they sit at the intersection of verification and politics. How a case is dealt with will depend not just on the strength of the evidence and how it is presented by the organization charged with monitoring verification, but on how the political body charged with handling the case decides to proceed on the basis of that evidence. This in turn will depend on the political balance within the body at the time, the willingness of certain states to support and advocate action, and on the impact of extraneous nuclear and other international issues.

The IAEA and Non-Compliance Reporting

The International Atomic Energy Agency (IAEA) is charged with verifying compliance with nuclear non-proliferation commitments. Established by Statute in 1957 and currently with 164 member states, its verification system, known as safeguards (see Annex A), is elaborate and intrusive. Safeguards under the 1968 Nuclear Non-Proliferation Treaty (NPT) are designed to verify that states that have foresworn nuclear weapons do not divert to weapons purposes any materials and technologies they have declared to be for peaceful uses. Safeguards are also intended to verify that there are no undeclared nuclear materials or activities in the state. The goal, as in other verification regimes, is to provide early warning to the Agency and the international community about non-compliance in order to permit action to be taken to address the situation. The Agency's Secretariat, through its Department of Safeguards, manages the system. Although devised in the early years of the Agency, safeguards have been significantly expanded and strengthened over time. The system is set out in detail in a sequence of treaties, agreements, and subsidiary arrangements, as well as in technical documents issued by the Secretariat.

In contrast, the way in which a case of non-compliance with safeguards is determined, reported, and responded to is treated sparingly in all such documents. The broad outline is clear enough. Under the Agency's 1957 Statute, safeguards inspectors are responsible for reporting non-compliance to the IAEA's Director General. The Director General is in turn responsible for reporting to the IAEA's 35-member Board of Governors (BOG), the Agency's policy-making body. The Board is responsible for determining that non-compliance has occurred and deciding whether to report it to the Agency's membership at large (most readily through the annual General Conference), to the UN General Assembly, and to the UN Security Council. Action to bring a state back into compliance may be taken by the Board, although its powers are limited, and by the Security Council, which has enforcement powers under the UN Charter.

But the details of the process are sparse. The Statute devotes just one paragraph to the way in which a case of non-compliance with safeguards should be handled (Article XII.C). As for the NPT, which obliged non-nuclear weapon states parties to conclude safeguards agreements with the IAEA and gave the IAEA its true *raison d'être*, it contains no reference to non-compliance.¹ Its Article III simply says that these agreements are to be "negotiated and concluded in accordance with the Statute of the IAEA and the Agency's safeguards

¹ The only use of the word "comply" in the NPT is in Article III.3, which requires that safeguards be implemented to comply with Article IV of the treaty protecting the "inalienable right" of states parties to the peaceful uses of nuclear energy.

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 explosive devices.” By implication this tied compliance with NPT safeguards agreements to Article XII.C of the Statute, but no further details were provided.

Safeguards agreements themselves do not contain much more guidance than the Statute and in some instances appear inconsistent with it. In early safeguards agreements, so-called INFCIRC/66 accords, which are applicable to specific materials and/or facilities, only one sentence refers to non-compliance.² In Comprehensive Safeguards Agreements (CSAs) pursuant to the NPT, non-compliance is addressed in just two paragraphs—although the word non-compliance is not used.³ The 1997 Model Additional Protocol (AP) to CSAs, meanwhile, makes no mention of non-compliance, since the two instruments are meant to be read together.⁴ The relationship of all these documents to non-compliance will be considered in detail in this study.

A further lacuna is that there is no agreed definition of safeguards non-compliance. Nor has the General Conference or Board of Governors sought to agree on one. The Secretariat’s *Safeguards Glossary*, which does not have legal status, provides only a circular definition of non-compliance as being a “violation by a State of a safeguards agreement with the IAEA.”⁵ This is followed by examples too broad to be helpful.

Given the unprecedented intrusiveness of the safeguards system itself, notably on-site inspections, it is perhaps understandable that states have not been willing to spell out the non-compliance process in too much detail. In the first decades of the Agency’s existence, moreover, there were no ready-made models to follow, at least in the nuclear field. The absence of detail and precedent as to how the non-compliance process should work has forced the Agency to invent it through practice, as successive cases of non-compliance have emerged.

2 IAEA, *The Agency’s Safeguards System* (1965, as provisionally extended in 1966 and 1968), INFCIRC/66/Rev.2, (Vienna: IAEA, 1968), para. 18.

3 IAEA, *The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, INFCIRC/153 (corrected), (Vienna: IAEA, 1972), paras 18 and 19. All comprehensive safeguards agreements concluded by the Agency are based on this document.

4 *Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards*, INFCIRC/540 (corrected), (Vienna: IAEA, 1998).

5 IAEA, *IAEA Safeguards Glossary*, 2001 Edition, International Nuclear Verification Series, No. 3, (Vienna: IAEA, 2002), p. 13.

The IAEA Secretariat has to date reported to the Board eight states for violations of their safeguards agreements. Six were declared by the Board to be in non-compliance (Iran, Iraq, Libya, North Korea [Democratic People's Republic of Korea or DPRK], Romania, and Syria) and two were not (Egypt and South Korea [Republic of Korea or ROK]). Due to the number and complexity of the cases that it has confronted, the IAEA has had more experience dealing with non-compliance than all other multilateral arms control bodies combined.⁶ Its track record is therefore relevant not just to the nuclear realm but to all areas of arms control, disarmament, and non-proliferation.

Aims of the Study

This study considers in detail the process by which, in theory and practice, non-compliance or suspected non-compliance with IAEA safeguards agreements and other international nuclear obligations undertaken by or imposed on states (such as by the UN Security Council) is reported by the IAEA's Secretariat. It seeks to explain how the Secretariat drafts its reports and the considerations it needs to take into account. As one IAEA official wryly noted when asked to describe how the Secretariat drafts its non-compliance reports, it is like asking how sausages are made—"you really don't want to know." Nonetheless, there is obviously great interest in knowing, not just from an academic perspective but because the process and its outcome have significant implications for international affairs.

This report also tackles the question of how the IAEA's Board of Governors and other relevant bodies deal with Secretariat reports, in particular whether the Board reports a non-compliance case to the Security Council. It outlines and draws conclusions from the eight non-compliance cases that the Agency has dealt with to date and summarizes trends and controversies that have arisen. In addition, the study also investigates regular reporting by the Secretariat in the form of the annual Safeguards Implementation Report (SIR). Finally the report considers what lessons may be drawn from experience to date with the non-compliance reporting process and what useful changes might be made. In a Postscript the study provides a preliminary analysis of the implications of the IAEA's past and present practice for its handling of compliance with the Joint Comprehensive Plan of Action (JCPOA) concluded with Iran in July 2015.

6 The Organization for the Prohibition of Chemical Weapons has had one case, that of Syria, beginning in 2013 and continuing. The Preparatory Commission for the Comprehensive Nuclear Test Ban Treaty Organization has unofficially verified nuclear tests conducted by India, Pakistan, and North Korea. But as the Comprehensive Nuclear Test Ban Treaty has not yet entered into force and none of the three states involved has even signed the treaty, no non-compliance case could be brought. The parties to the 1972 Biological Weapons Convention have met once to consider a non-compliance accusation, made against the United States by Cuba in 1997, but concluded that the complaint had no substance (see Milton Leitenberg, *The Problem of Biological Weapons* (Stockholm: Swedish National Defence College, 2004), pp. 74–75).

This study does not delve into detail about the technology or techniques of IAEA monitoring or verification except as they relate to the drawing of non-compliance conclusions in particular cases. Nor does it consider in detail the imposition of sanctions or other penalties by the IAEA or the Security Council. The study thus confines itself to just the middle phase—the least explored—of the non-compliance “life cycle.”

A Note About Terminology

The compliance/non-compliance field is rife with linguistic ambiguities and sleights-of-hand. This is partly due to the absence of an agreed definition of non-compliance. But it is also due to the political baggage that the term “non-compliance” has acquired as a result of the Iran and other cases. Some observers reserve the term solely for those cases that the IAEA’s Board of Governors and/or UN Security Council have officially declared to be so. Others use it only for “serious” cases, however defined. This study uses the term non-compliance in its commonly accepted, literal sense—a breach or violation of the terms of an agreement—without prejudging how marginal or serious any specific instance of non-compliance may be. This is not intended to gainsay decisions by the IAEA Board of Governors and/or UN Security Council in any particular case. It will be made clear in the text when that meaning is intended.

Further terminological ambiguity exists concerning the notion of a “reportable” level of non-compliance. Most observers agree that minor, trivial, or “technical” non-compliance should be treated differently from serious, deliberate violations, especially that which, in this field, appear geared to the acquisition of nuclear weapons. This begs the question of how to describe the seriousness of a non-compliance allegation or case. Non-compliance is viewed by some as a series of increasingly troublesome steps and by others as a sliding scale of compounding seriousness. The IAEA, to avoid giving the impression that it condones any non-compliance, avoids the use of adjectives like trivial, technical, minor, major, serious, or significant, although it does speak of its “serious concerns” about a state’s activities and uses other terms to denote the gravity of a non-compliance situation. This study will occasionally use such descriptors for the sake of the general reader. This is not to ignore their imprecision or the fact that the seriousness of a non-compliance case is not an invariant standard. As Chayes and Chayes note in their landmark study, the acceptable level of compliance:⁷

7 Abram Chayes and Antonia Handler Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (Cambridge, MA: Harvard University Press, 1995), p. 17. See also Gloria Duffey, “Introduction: thinking about compliance,” in *Compliance and the Future of Arms Control: Report of a project sponsored by the Center for International Security and Arms Control* (Cambridge, MA: Ballinger Publishing Company, 1988).

... changes over time with the capacities of the parties and the urgency of the problem. It may depend on the type of treaty, the context, the exact behavior involved. The matter is further complicated because ... questions of compliance are often contestable and call for complex, subtle, and frequently subjective evaluation.

A further terminological challenge is to determine whether the use of the term “IAEA” or “Agency” is meant in any particular instance to mean the entire Agency, including the General Conference, the Board, the Director General, and the Secretariat, or whether it means just the Secretariat (with or without the inclusion of the head of the Secretariat, the Director General). Member states, the Secretariat, and outside observers sometimes use “IAEA” or “Agency” deliberately to obfuscate who is responsible for doing what. Sometimes member states and the Board will use “Agency” when they wish to attribute responsibility to the Secretariat without actually naming it. At times the Secretariat uses “IAEA” or “Agency” to assume political cover for its actions and decisions. The only remedy for this confusion is to be aware of the problem and make allowances accordingly.

A final terminological subtlety. This study deliberately uses the word “reporting” in its title and to describe the process by which the IAEA Secretariat relays a non-compliance case to the Board of Governors and the way in which the Board relays the case to the UN Security Council. In common parlance and in the media it is often said that a case is “referred” to the Security Council, implying that the Board hands the case over to the Council and in a sense washes its hands of it. Even IAEA directors general have used the term “referral”—much to the chagrin of the Agency’s legal advisors. In fact all that is required is that the Board “report” the case to the Council, the term used in the IAEA Statute.⁸ But the word “report” is itself ambiguous, at least in English. In its blandest sense it can simply mean “providing information,” but in another it can mean reporting wrong-doing to a higher authority, such as pointing out a suspected crime to the police. The IAEA Secretariat does both, while the Board acts more like the reporter of a crime. Such ambiguity plays into disagreements about the role of the various players involved in “reporting” non-compliance by states with their safeguards obligations—as we shall see.

⁸ The term “referral” is only used once in Comprehensive Safeguards Agreements, with regard to a situation in which a state party repeatedly refuses to accept the designation of IAEA safeguards inspectors; paragraph 9 of INFCIRC/153 says such refusal “would be considered by the Board upon referral by the Director General to the Agency with a view to taking appropriate action.”

PART 1: THE NON-COMPLIANCE REPORTING PROCESS: IN THEORY AND PRACTICE

The process by which the IAEA finds a state in non-compliance with its safeguards undertakings has evolved through practice and precedent since the first case, that of Iraq, arose in 1992. The guidance available to the Secretariat—in the Statute, safeguards agreements, and other legal documents—to assist it in determining and reporting non-compliance has remained minimal and in some respects contradictory.

The Statute of the IAEA, in one part of one paragraph, Article XII.C, sets out a non-compliance process that has become standard in the disarmament, arms control, and non-proliferation field. In the event of non-compliance being detected by the Agency's inspectors they are obliged to report the matter to the Director General, who in turn is obliged to report it to the Board of Governors.⁹ The Board, if it determines that non-compliance has occurred, is obliged to report the matter to the UN Security Council—as well as to all IAEA member states and the UN General Assembly.

IAEA Statute, Article XII.C (extract)

The inspectors shall report any non-compliance to the Director General who shall thereupon transmit the report to the Board of Governors. The Board shall call upon the recipient State or States to remedy forthwith any non-compliance which it finds to have occurred. The Board shall report the non-compliance to all its members and to the Security Council and General Assembly of the United Nations.

The Article goes on to set out steps that the Agency can take if the state does not “take fully corrective action within a reasonable time.”

⁹ The first part of the article reads: “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 article was originally intended to apply to Agency projects with member states, which at the time were expected to be the Agency's main activity, but has since come to be read as applicable to all safeguards agreements.

The Statute also contains, in Article III.B.4, an alternative route for reporting non-compliance to the Council. This article requires the Agency to submit annual reports to the General Assembly on its activities, but also “when appropriate” to the Security Council. It continues: “in connection with the activities of the Agency, should there arise questions that are within the competence of the Security Council, the Agency shall notify the Security Council, as the organ bearing the main responsibility for the maintenance of international peace and security; and may also take measures open to it under this Statute, including those provided in paragraph C of Article XII.” This suggests that the designers of the Statute had in mind matters that were not necessarily to do with non-compliance by a state, but which threatened international peace and security in other ways, such as a breakdown of the safeguards system. Another example might be the withdrawal of a state from the NPT and the Agency as a prelude to acquiring nuclear weapons. But Article III could also be used in an indeterminate non-compliance case, where there were strong suspicions and serious concern, but no watertight evidence.

Safeguards agreements, while referring to Article XII.C, have slightly different language and guidance on how a non-compliance case should be handled. INFCIRC/66 agreements, currently only applicable to India, Israel and Pakistan, provide that: “In the event of any non-compliance by a State with a *safeguards agreement* [emphasis in the original], the Agency *may* [emphasis added] take the measures set forth in ... the Statute.”¹⁰ Comprehensive Safeguards Agreements also contain different wording to the Statute in their paragraphs 18 and 19, indicating a degree of flexibility and avoidance of the automaticity implied by the Statute.

The Board of Governors has chosen not to elaborate such safeguards documents or establish any other guidance, either for the Secretariat or for itself. The absence of detail about non-compliance mechanisms in the relevant legal instruments, as well as the lack of an agreed definition of non-compliance, has led to significant legal, procedural, substantive, and semantic conundrums for the Agency and its member states over the years. The Board of Governors and the IAEA Secretariat have literally had to make up the process as they have gone along. The existing documents have been interpreted in various ways at various times. Evolving practice and the establishment of precedent have been all-important. The following sets out how the non-compliance reporting process works in practice.

¹⁰ INFCIRC/66/Rev.2, para. 18.

Comprehensive Safeguards Agreements (CSAs)

Article 18

If the Board, upon report of the Director General, decides that an action by [state x] is essential and urgent in order to ensure verification that nuclear material subject to safeguards under this Agreement is not diverted to nuclear weapons or other nuclear explosive devices, the Board may call upon [state x] to take the required action without delay, irrespective of whether procedures have been invoked pursuant to Article 22 of this Agreement for the settlement of a dispute.

Article 19

If 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 this Agreement, to nuclear weapons or other explosive devices, it may make the reports provided for in paragraph C of Article XII of the Statute of the Agency ... and may also take, where applicable, the other measures provided for in that paragraph.

Role of the “Inspectors”

Under Article XII.C of the Statute it is literally the Agency’s inspectors who are designated as responsible, in the first instance, for “determining whether there is compliance,”¹¹ and by implication suspected or actual non-compliance. The inspectors are then obliged to “report any non-compliance to the Director General.”¹² The idea appears to have been that the inspectors would sound the proliferation alarm and, as a result, the non-compliance sequence, as broadly outlined in the Statute, would be automatically triggered. This was always a rather naïve way of conceiving how the system would work. In real life, the process was always likely to be much more complicated and has become even more so as the IAEA’s safeguards system has grown in coverage and complexity.

¹¹ IAEA, *Statute of the International Atomic Energy Agency*, 1957, Article XII.C.

¹² Statute of the IAEA, Article XII.C.

Today it is not just inspectors, those who go into the field to conduct on-site inspections at nuclear facilities, who are involved in determining compliance, but a range of analysts, other experts, and support staff. A concern with obtaining a comprehensive picture of states' nuclear activities has led to development of the State-level concept (SLC), which emphasizes that the Agency should be concerned with all valid and relevant information about a state in determining compliance—not just that collected by inspectors.¹³ The Agency's ability and willingness to use intelligence information provided by member states, along with open source information and commercial satellite imagery, has added a whole new dimension to verification of compliance with non-inspector based sources. Judgments about how and when to use intelligence information are especially challenging. The SLC also envisages that all safeguards personnel, whether managers, analysts, or inspectors, work closely in “collaborative analysis,” using multiple types of expertise and information to arrive at an annual “safeguards conclusion” for each state. A team is assembled for each country to conduct “ongoing” reviews of the relevant information, to evaluate its consistency with the state's declarations about its nuclear program, and to plan future safeguards activities. Occasionally a “red team” system has been used to double check on a conclusion reached. The age of the lonely inspector catching a state “red handed,” if it ever existed, has long been superseded.

Today, all safeguards personnel, including inspectors, report not directly to the Director General but to the head of the Department of Safeguards—the Deputy Director General (DDG) for Safeguards—a post not specified in the Statute and that did not exist for many years (although there was for a time an “Inspector General”). It is the DDG who will, in practice, decide whether a non-compliance case is credible and should be reported to the Director General. Hence it is not solely the inspectors who have non-compliance assessment and reporting functions, but the whole Safeguards Department, represented by the DDG.

Regular Reporting to States

Regular reporting channels are used by the Department of Safeguards to signal “safeguards implementation” issues to states, which may include indications of non-compliance. The Secretariat is obliged to report to states formally by letter, at intervals specified in the confidential Facility Attachment of the Subsidiary Arrangements concluded pursuant to their CSAs. This so-called 90(a) statement is usually issued after each

¹³ IAEA, *The Conceptualization and Development of Safeguards Implementation at the State Level: Report by the Director General*, GOV/2013/38 (Vienna: IAEA, 2013). IAEA, *Supplementary document to the Report on the Conceptualization and Development of Safeguards Implementation at the State Level*, GOV/2014/41 (Vienna: IAEA, 2014).

inspection and records the activities carried out at each facility and the results, including any discrepancies found and whether they have been resolved.¹⁴ The Agency also provides such a statement on the conclusions drawn from its verification activities for each facility over a material balance period.¹⁵ The letters may be sent from the Director of a Division within the Safeguards Department or from the DDG. The Subsidiary Arrangements specify to whom the letter should be sent, in accordance with the state's wishes.¹⁶ This may be the state's regulatory authority (as in the case of Australia) or to the state's foreign ministry (often used by states with little or no nuclear material). Copies are sent to the state's resident ambassador in Vienna if there is one. The state may or may not respond to such letters.

For states with an Additional Protocol, the Agency is obliged, under the complementary access provisions, to provide the state with a report on the activities performed by inspectors, the results of activities in respect of questions or inconsistencies, and the conclusions drawn.

Dealing with the State Directly on a Non-Compliance Issue

The Department of Safeguards has various options available to it in responding to suspected non-compliance by a state before alerting the Director General, none of them specified in the Statute. In the first instance, inspectors in the field who are faced with a "discrepancy," "anomaly,"¹⁷ or other issue of concern, including non-cooperation from the state, may seek to deal with it on the spot. This means communicating with the operator of the nuclear facility and/or the representative of the state, such as an official of an atomic energy agency or a regulatory body, or even a foreign ministry official.

Today, states with a CSA are expected to have an effective state system of accounting and control (SSAC) in place and a designated national authority to expedite the application of safeguards and communications with the IAEA on safeguards matters.¹⁸ As part of the new safeguards culture cultivated at the Agency since the Iraq case in the early 1990s,

¹⁴ See Annex B for details.

¹⁵ The time between two consecutive physical inventory takings. For states with item-specific safeguards the reporting of results and conclusions of verification activities is less detailed and less standardized (see Annex B).

¹⁶ Interview with Olli Heinonen, Harvard, June 5, 2015.

¹⁷ Olli Heinonen notes that "discrepancy" refers to an amount of nuclear material not accounted for (over 100 grams), while an "anomaly" refers to the time taken to resolve a discrepancy (interview with Olli Heinonen, Harvard, June 5, 2015).

¹⁸ For some parts of the world there are also Regional systems of accounting and control (RSACs).

safeguards inspectors are expected to be more investigatory and show more initiative in the field, including seeking clarification of issues on-site without automatically consulting headquarters in Vienna.¹⁹ Inspectors themselves may also seek “complementary access” to sites or parts of sites in states with an AP in force.²⁰ Ultimately, if an issue is not resolved on-site, headquarters will have to be involved. When an anomaly is discovered the inspector will brief the relevant section head on return to Vienna.²¹ The section head in turn files this report with the division director and the DDG.

The Safeguards Department may then, at its operational level (the Department has three operational divisions covering different parts of the world), communicate directly with state authorities to try to resolve the issue. According to the Secretariat, anomalies, questions or consistencies are identified “and addressed in a timely manner through follow-up action.”²² Such activities are designed to ascertain whether these “indicate the possible presence of undeclared nuclear material or activities or the diversion of nuclear material from peaceful activities.”²³ Action may include requests for clarification, additional information, and/or complementary access. In some cases the Secretariat has described additional access as “visits” in order to downplay their political sensitivity and in the hope that the issues can be resolved at a “technical” level.

Reporting to the Director General

Failing resolution at the technical level or at the level of the Safeguards Department, the DDG will take the matter to the Director General. Even if a matter is resolved at the technical level, a sufficiently serious case is likely to be reported to the Director General. A running list of discrepancies and anomalies, signed by the DDG, is provided to the Director General every month.²⁴ Most of these are minor and due to such technical reasons as equipment breakdowns. They may also be due to the inability of inspectors to conduct planned inspections because of logistical problems that are not the fault of the state concerned.

19 See Trevor Findlay, *IAEA Safeguards Through a Cultural Lens: Power, Planning, and Habit* (Cambridge, MA: Project on Managing the Atom, Belfer Center for Science and International Affairs, Harvard Kennedy School, forthcoming).

20 See IAEA, *IAEA Safeguards Glossary*, pp. 91–92.

21 Interview with Olli Heinonen, Harvard, June 5, 2015.

22 GOV/2013/38, p. 7.

23 IAEA, *The Safeguards Implementation Report for 2013*, GOV/2014/27, April 23, 2014, p. 22.

24 Interview with Olli Heinonen, Harvard, June 5, 2015.

The DDG may nonetheless be required to make finely-tuned judgments about when to alert the Director General about an emerging non-compliance case, often in conditions of uncertainty. In the case of North Korea in 1993, the difference between the nuclear material it reported and that initially discovered by inspectors was 60 grams, less than the 100 grams technically considered to be a “discrepancy.” Inspector Olli Heinonen believed the case should have been reported to the Director General because of strong suspicion that there was additional undeclared material and because North Korean behavior had been less than forthcoming even before it concluded its safeguards agreement.²⁵ After considerable debate among safeguards staff the Director General was informed.

Role of the Director General

Unless the Director General himself is considered to be the “chief inspector” (which is sometimes how the media portrays him²⁶), the Statute appears to leave the head of the IAEA out of involvement in “determining” that a case of non-compliance has occurred. Inspectors apparently are the only ones authorized to decide. The Director General is then evidently obliged to pass the report directly to the Board of Governors. In practice it was always inadvisable and unrealistic to expect the Director General to act as a mere post office and simply rubber stamp a non-compliance report presented to him by the inspectors.

As head of the IAEA Secretariat and chief diplomatic representative of the organization, a post that has assumed a heightened international profile as successive non-compliance cases have arisen, it was inevitable that the Director General would come to play a critical part in deciding what to do with a case of non-compliance that is brought to his attention by the Department of Safeguards. As we have seen, the Director General is unlikely to be taken by surprise by receiving a full-blown non-compliance report that recommends or suggests taking the case to the Board immediately. He will likely have been alerted both informally and formally by safeguards staff at a much earlier stage. Having been alerted, it is ultimately his decision as to whether to deal with the case “in house” within the Secretariat or to report it to the Board.

²⁵ Interview with Olli Heinonen, Harvard, June 5, 2015.

²⁶ So far all the Agency's directors general have been men.

Dealing With the State Directly

When a suspected or actual case of non-compliance arises the Director General may decide, depending on the severity of the issue and the state's response at lower levels, that the first course of action is to communicate with the member state at a higher level. This may be done through the state's representative in Vienna. The ambassador (who is sometimes also the state's Governor on the Board if the state happens to be a Board member) may be called in for "consultations" with the Director General and senior safeguards staff. He or she may be handed a written communication—an Aide Memoire or Third Person Note. Alternatively, a formal letter may be sent to a government minister or even head of government. The Director General may even pay an early visit to a state capital for high-level consultations as a non-compliance case emerges, as Director General Mohamed ElBaradei did in the case of Libya.

The Director General may also have informal or formal talks in the margins of international gatherings convened for other purposes, such as the UN General Assembly, at which the Director General presents a report on behalf of the IAEA every year (as provided for in the Statute). One gets the impression from ElBaradei's memoirs that when he was Director General he "bumped into" state representatives at meetings specifically to deliver an informal message about a non-compliance case. Sometimes controversially, the Director General may also decide to meet with other IAEA member states in an effort to resolve a non-compliance question, either when it first arises or during the often protracted process of seeking to resolve the case.

For the Secretariat and the Director General, the ideal, depending on the severity of the case, is to try at least at the outset to resolve a non-compliance matter informally and at the lowest possible political level. This helps avoid embarrassment to the state and gives it a chance to return to compliance with its public record intact. Such an approach is especially important if the breach turns out to have been inadvertent or innocuous. It also helps avoid embarrassing the Agency if the Secretariat is mistaken in its initial judgment. In such instances, once reassurances have been received from higher levels of the state concerned that such activity will cease or has ceased, and the Agency has verified a return to compliance, the matter may be considered closed—although the Agency naturally continues its normal verification activities with regard to that state. Occasionally all does not go according to plan, as will be apparent in the case studies that follow.

Reporting to the Board

According to the Statute, it is the Director General who is responsible for reporting “*any* [emphasis added] non-compliance” to the Board. This appears to be mandatory. On receiving such a report the Statute also appears to demand that the Board automatically report the non-compliance to the Security Council. Safeguards agreements, however, move away from the apparent automaticity of the Statute and provide the Director General with greater reporting flexibility. CSAs, for instance, provide simply that the Director General report “relevant information” to the Board, which may or may not involve implied or alleged non-compliance (or use of the word).²⁷ The controversies that have arisen over the differences between the Statute and safeguards agreements will be considered in Part 3 of this study.

Before submitting a written report to the Board, the Director General may wish to make an oral report to the Board and has often done so. In the case of Romania, this was all that he did, since the matter had been resolved by the time he reported to the Board. This approach has the advantage of not committing the Director General in writing while giving the Board due notice that there is an issue to be considered.

As for written reports, since it is the Director General who presents such a report to the Board, generally in the form of a formal “Report by the Director General,” he will naturally want to be involved in shaping its content and conclusions, based on a draft composed by the Safeguards Department. This may come down to selecting specific words. Mohamed ElBaradei recounts seeking advice from inspector Jacques Baute and legal advisor Laura Rockwood on using “less sensational terminology” to describe fake documents purporting to show sales of yellowcake by Niger to Iraq in 1999-2001.²⁸

The report drafting process remains obscure to most outside observers and even to some within the Secretariat. The Secretariat did produce an explanatory note for use in answering press inquiries in 2009 that was useful and would be worth updating, elaborating, and making more widely available.²⁹ This is especially important because several controversies have attended the process. These include the definition of non-compliance that should trigger a report, the use of the word “non-compliance” by the Director General, and the role of the Director General in shaping the content and conclusions of reports. These will all be considered in Part 3 of this study.

²⁷ INFCIRC/153 (corrected).

²⁸ Mohamed ElBaradei, *The Age of Deception: Nuclear Diplomacy in Treacherous Times* (New York: Metropolitan Books, 2011), p. 63.

²⁹ “Background information on the Safeguards Reporting Process,” unpublished Secretariat paper, August 28, 2009.

In addition to providing a written report, the Director General will usually appear in person before the Board to present the findings. This is generally preceded by “technical briefings” by Department of Safeguards experts who provide the Board with technical detail on the findings and answer Governors’ questions.³⁰ Sometimes the technical briefings, since they present the crux of the case against a state, dominate the proceedings. Such informal reporting processes permit the Secretariat to share information and assessments that it might not wish to commit to paper and to learn about the concerns of Board members. They also permit the Director General and Secretariat to gauge the willingness of the Board to entertain a more formal Secretariat conclusion that non-compliance has occurred. This helps protect the Secretariat from a “rush to judgment” and enables it to better prepare formal reports that will satisfy Board members.

The state implicated in the non-compliance case may be a member of the Board or may seek to attend meetings at which its case is considered. The state’s ambassador (or governor) may wish to respond to the allegations. The presentation of and debate on the Director General’s reports provide considerable opportunities for political theater, which naturally influences the way the Secretariat drafts and frames such reports. The reports are thus drafted with several audiences in mind: the alleged non-compliant state; the Board’s Governors; the general IAEA membership; and the broader public, especially the media, academics, and civil society. It is often difficult to satisfy all of these “customers” at once.

Other Reports

Although not required by the Statute, the Director General also reports to the Board in June each year on the implementation of safeguards over the previous calendar year in the Safeguards Implementation Report.³¹ The SIR summarizes state-specific non-compliance cases, mentions any minor safeguards infractions, and comments on the general operation of the safeguards system.³²

As well as reporting through the SIR and in state-specific reports to the Board, the Director General may choose to report to the IAEA membership as a whole. The best opportunity is at the General Conference held in September each year, which is attended

30 “Background information on the Safeguards Reporting Process.”

31 In respect of regular reporting, INFCIRC/153 states only that “the technical conclusion of the Agency’s verification activities shall be a statement in respect of each material balance area of the amount of material unaccounted for over a specific period, and giving the limits of accuracy of the amounts stated” (para. 30).

32 The general operations of the safeguards system are also reported in the Agency’s Annual Reports; in the annual report of the Director General to the General Conference on “Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System”; in the Agency’s biannual Program and Budget; and occasionally in external auditor’s reports.

by most if not all IAEA member states. Such a report has been presented on North Korea to the General Conference since 2002, rather than to the Board, apparently at the request of South Korea. Such reports are more in the spirit of keeping the membership informed, rather than as part of a live non-compliance process.

It is also the Director General who is responsible for preparing the report on a non-compliant state to the UN Security Council, the IAEA membership, and the UN General Assembly, if the Board of Governors decides that such a case should be reported. The Security Council may, on its own initiative, as in the Iraq and Iran cases, request the Director General to report to it. Such reports are sent simultaneously to the members of the Board and all other members of the IAEA.

Finally, the Director General has often been asked to report on compliance with ad hoc agreements negotiated by ad hoc coalitions of states, as in the cases of Iraq, North Korea, Libya, and Iran.

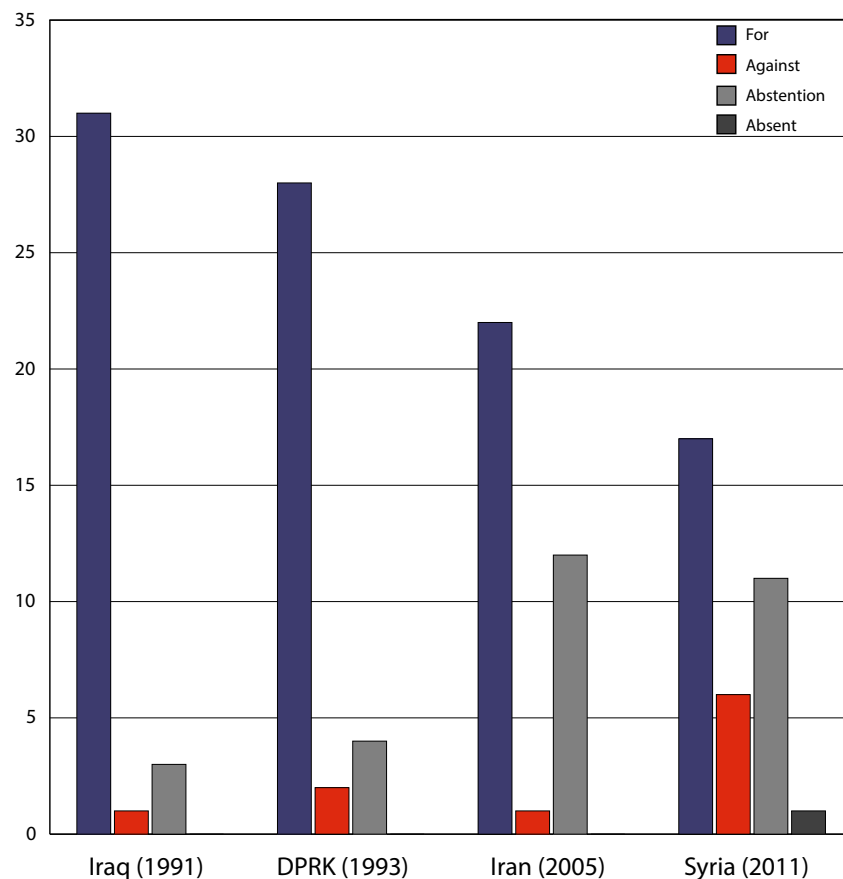
Role of the Board of Governors

Under the IAEA Statute the Board of Governors is responsible for dealing with cases of non-compliance reported to it by the Secretariat. By implication these are the cases that the Secretariat and the Director General have not been able to deal with by themselves. Clearly the most significant and fraught non-compliance issue that the Board has to face is when to report a case to the UN Security Council. It is only the Council, with its role in the maintenance of international peace and security, which can take significant enforcement action against a non-compliant state, under Chapter VII of the UN Charter. This is a critical point in a non-compliance case—and is where the question of when to sound a proliferation alert most starkly comes into play.

In the rare case where a serious breach of a safeguards agreement is suspected or confirmed and the Director General reports it to the Board, the Board has several options. These have expanded as the Statute and safeguards agreements have been interpreted in successive cases (this evolution will be considered in the case studies and in detail in Part 3). At a minimum the Board is likely to demand that the state return to compliance and cooperate fully with the Secretariat in providing additional information and permitting further verification activities in order to clarify the situation. At the other extreme it may immediately report the case to the Security Council in the expectation that action will be taken to return the state to compliance.

The Board has a natural reluctance to report an IAEA member state to the Security Council given the political implications of such a dramatic step. Unless the evidence is overwhelming (it seldom is), the Board is unlikely to rush into a decision. Its inclination, at least at the outset, is to seek to make decisions by consensus (invoking the famous “Spirit of Vienna”), only resorting to a vote when it becomes clear that consensus is unachievable. Some or all of its members may be unconvinced by the evidence and be reluctant, whether for political or substantive reasons, to immediately declare the state in non-compliance. Some may wish to give the state a chance to explain itself or return quickly to compliance. While the Statute is silent on the matter, CSAs oblige the Board to “afford” the state “every reasonable opportunity to furnish the Board with any necessary reassurance.”³³ Like the Secretariat, the Board also may collectively wish to keep the case within its own control rather than hand it over to an unpredictable Council, especially one that is subject to the veto of any of the permanent five (P5) members.³⁴

Figure 1: IAEA Board Voting on Non-Compliance Resolutions



³³ INFCIRC/153, para. 19.

³⁴ China, France, Russia, the United Kingdom, and the United States.

As shown in Figure 1, the Board has become increasingly torn over non-compliance cases. While it may be able, in the Spirit of Vienna, to stave off voting for a time, when it finally does so it is increasingly divided. Voting in favor of finding a state in non-compliance has steadily declined, providing stark evidence for the thesis that there is increasing “politicization” of the Board.

In a non-compliance case the Board almost invariably decides, whatever else it does, to seek further information from the Director General, including that obtained from additional inspections. Often a series of formal, written reports from the Secretariat is sought by the Board once it becomes aware of a non-compliance problem and until it is resolved, whether or not the issue is ultimately reported to the Security Council. In difficult, prolonged cases the Board tends to seek a report at each of its regular meetings (in March, June, September and December). The Board may also request a report for an extraordinary meeting if circumstances warrant it.

If the state fails to take “fully corrective action” within a reasonable time after being requested to do so, the Board has few options for pressuring the state to return to compliance. It may curtail or suspend assistance provided by the Agency or by a member state and/or call for return of materials and equipment already provided. The Agency may also, in accordance with Article XIX of the Statute, suspend a non-compliant member from the exercise of the privileges and rights of membership. Conscious that if it takes these steps the country concerned may retaliate by withdrawing from the Agency, and perhaps from the NPT and its safeguards agreement as well (as did North Korea), the Board has tended not to take them, but rather to report the state to the Security Council.

Role of the Security Council

The Security Council is a conservative body that normally is not eager to add new cases to its already heavy workload but would rather devolve them to others. The respective actions of the Council and the IAEA are therefore usually carefully choreographed, in part due to the fact that the five permanent members of the Council are also prominent members of the Board of Governors. Several non-permanent Council members are also likely to be members of the Board at any one time.

Far from having to take over a non-compliance case reported to it by the IAEA Board of Governors, the Council may choose to simply ignore it, as it did for some years with the North

Korea case. It may, as a next (minimal) step, issue a presidential statement—a non-binding summation of the “sense of the Council.” If the Council becomes sufficiently “seized” of the issue it may then adopt a resolution. This will normally instruct the non-compliant party to fully cooperate with the Agency in clarifying issues, submit itself to further verification measures, and provide the necessary access to IAEA inspectors. It may also request regular reports from the IAEA’s Director General on the extent to which the state has accounted for its non-compliance and returned to full compliance.³⁵ In any event the IAEA and its Board continue to be jointly responsible for the case even if the Council has decided to take action of its own, such as imposing sanctions. Only in the Iraq case in 1991 did the Council consider taking away the nuclear file from the Agency and giving it to another verification body, the UN Special Commission (UNSCOM). Ultimately, it did not do so.

With major enforcement tools at its disposal the Council may, if a non-compliant state declines to comply with its calls for cooperation and a return to compliance, take several steps of increasing severity by adopting a resolution or series of resolutions. Such resolutions, depending on the politics of the Council at the time, may or may not be adopted under Chapter VII of the UN Charter, which makes compliance mandatory for all UN member states, including the accused. The Council may start by authorizing the imposition of sanctions, choosing among various types, including general economic sanctions or those targeted against the interests of the state’s leadership. These may be ramped up in successive resolutions. As the ultimate sanction the Council may authorize the use of military force.³⁶

When the Security Council decides to compel a non-compliant state to take additional measures beyond simply returning to compliance with its safeguards agreement, IAEA non-compliance reporting becomes more complicated. For example, after the Council ordered Iran to stop the production of highly-enriched uranium (HEU), the Secretariat’s reports also had to report on compliance with this requirement, not just on Iran’s original safeguards obligations. In addition, if a state continues to refuse to cooperate with the Agency in any of its enhanced verification activities, the IAEA report is also expected to comment on such non-cooperation. Continuing reporting on the state’s compliance with its regular safeguards obligations is also expected. Keeping these aspects of reporting distinct is a challenge, as will be seen in examining individual non-compliance cases.

³⁵ United Nations, *Charter of the United Nations*, 1945, Chapter IV, Article 12.

³⁶ See James Cockayne and David M. Malone, “The Security Council and the 1991 and 2003 wars in Iraq,” in *The United Nations Security Council and War* ed. Vaughn Lowe et al. (Oxford: Oxford University Press, 2008).

Even when the Security Council authorizes military enforcement action, the reporting obligations of the IAEA do not cease. Although its inspectors may be withdrawn prior to military action, as in the Iraq case, or are ordered out, as in the North Korea case, the Agency is still expected to monitor and, to the extent it can, verify compliance. Whatever the situation, the IAEA is invariably required to continue to report periodically to the Board and Security Council until the issue is finally put to rest.

Even if the Security Council finds itself unable to take action, informal coalitions of states may form, as in the cases of North Korea and Iran, to negotiate agreements which hand the Agency a verification role requiring yet more reporting. The Secretariat's non-compliance reporting burden seems inevitably to grow in scale and complexity.

Normally the General Assembly does not take any action in response to receiving a non-compliance report from the Director General. In 1993, however, in the absence of action by the Security Council, it passed a resolution (non-binding, as are all UNGA resolutions) in response to the Secretary-General's report on North Korea which simply called on the country to return to compliance.³⁷

³⁷ UNGA has been substantively involved in a non-compliance case in the area of chemical weapons by setting up an ad hoc verification mechanism for the 1921 Geneva Protocol. See Jez Littlewood, "Investigating allegations of CBW use: reviving the UN Secretary-General's mechanism," *Compliance Chronicles*, No. 3 (Canadian Centre for Treaty Compliance, Carleton University, Ottawa, December 2006). However the Assembly lacks enforcement powers and in any event is not permitted, under the UN Charter, to consider a case that the Security Council remains "seized of" (UN Charter, Ch. 4, Article 12). At the time of the UNGA resolution on North Korea the Security Council was divided over its response to the situation and had taken no action.

PART 2: NON-COMPLIANCE CASES AND REPORTS: THE RECORD SO FAR

In the first 34 years of the Agency's existence, the only time the Secretariat felt obliged to report to the Board on a specific verification difficulty with a state—although this was not characterized as non-compliance or reported to the UN Security Council—was in regard to facility-specific safeguards applied to plants in India and Pakistan. In September 1981 the Director General informed the Board that the Secretariat was unable to verify that nuclear fuel was not being diverted from a CANDU (Canadian Deuterium Uranium) reactor in India and from the KANUPP (Karachi Nuclear Power Plant) in Pakistan, both under IAEA safeguards.³⁸ This occurred in the Pakistan case because it was no longer obtaining fuel for the plant from Canada under safeguards, but was now able to provide its own, not under safeguards. A similar problem arose in the case of India. The Director General made clear that he was not reporting a breach of a safeguards agreement in either case, but rather that the Agency was no longer able to verify non-diversion due to the changes in fuel supply. It is not clear whether the Director General presented an oral report and/or a written report in either case.

Ultimately, responding to the considerable political pressure raised by the reports, both governments reached agreement with the Agency on additional safeguards and in June 1982, nine months after he first raised the matter in the Board, the Director General was able to inform it that “in these two cases there has been significant progress since the end of 1982 and the technical safeguards measures implemented at the plants in question now enable the Agency once more to perform effective verification.”³⁹ The issue was reported publicly in the Agency's annual report for 1982, published in 1983, but without naming the two states involved. These two cases, while they were not reported to the Board as being non-compliance, did set some precedents for the way that future cases would be handled, notably in the technical way in which they were reported to the Board and in the efforts of the Secretariat to resolve the issue bilaterally with the states involved before invoking the authority of the Board.

38 David Fischer, *History of the International Atomic Energy Agency: the First Forty Years* (Vienna: IAEA, 1997), pp. 270–271 and p. 316, fn. 104

39 IAEA, *Annual Report for 1982*, GC(XXVII)/682, (Vienna: IAEA, 1983), p. 15 fn. 3, http://www.iaea.org/About/Policy/GC/GC27/GC27Documents/English/gc27-684_en.pdf (accessed September 23, 2015).

Ten years later the Agency was confronted with its first full-blown non-compliance crisis when it was discovered that Iraq had been seeking nuclear weapons in violation of its safeguards agreement. Beginning with the Iraq case in 1991, there have been a total of eight safeguards non-compliance cases which resulted in special reports to the Board of Governors and/or the Security Council. Five of these are considered serious and three considered less serious (although the Agency itself does not categorize them this way). The Agency's reports range from a single report which then "resolves" the case to the Board's satisfaction (Romania, South Korea, and Egypt), to a limited number of reports (Libya and Syria), to voluminous and complicated series of reports, some lasting for over a decade, on particularly egregious cases (Iraq, North Korea, and Iran).

Since the format, scope and nature of such reports, and the process by which they are produced, is not set out in the Statute or other foundational documents, the IAEA's Secretariat has had to invent every aspect of non-compliance reporting from scratch, as it had to do for non-compliance procedures generally. As the first multilateral verification organization and the one with the most intrusive powers, the Agency also has had no reporting precedents to emulate. At the outset the only guidance the Agency had was the traditional, generic way in which bodies in the United Nations family of organizations (and before that in the League of Nations) reported to their member states on a range of subjects. It is from these traditions that the diplomatic niceties (especially the respectful language used in addressing states), document format and numbering, and the formal, impartial tone of IAEA reports derive.

While it is beyond the scope of this report to examine the entire corpus of the IAEA's non-compliance reports, especially since some are publicly unavailable (notably the first report on North Korea, which is considered secret), this project has examined a significant number of them. The case studies below reveal evolving practice and precedent, but also the unique circumstances and character of each instance.

Table 1: IAEA Non-Compliance Reporting

Non-compliance case (reporting period)	Date of first report	No. of written reports ^a	Recipient of reports (no.)	No. and % publicly available
Iraq (1991–2005)	July 1991 ^b	65 ^c	United Nations Security Council (UNSC) (63) ^d BOG (2) ^e	65 (100%)
Romania (1992)	June 1992	0	Oral report to Board of Governors (BOG)	0
DPRK (1992–present)	June 1992 ^f	57 ^g	BOG (35) GC (14) BOG and GC (8)	23 ^h (40%)
Iran (2002–present)	September 2002	53	BOG (30) BOG & UNSC (23)	53 ⁱ (100%)
Libya (2003–2004)	February 2004 ^j	5	BOG (4)	4 ^k (80%)
ROK (2004)	August 2004 ^l	1	BOG (1)	1 ^m (100%)
Egypt (2004–2005)	September 2004	1	BOG (1)	1 ⁿ (100%)
Syria (2008–present)	November 2008 ^o	15	BOG (15) corrigendum (1)	15 ^p (100%)

^a Numbers are approximate due to public inaccessibility of entire corpus of reports. Excludes oral reports.

^b "Statements and Reports," INVO, <http://www.iaea.org/OurWork/SV/Invo/statements.html> (accessed September 30, 2015); excludes letters and other correspondence.

^c 27 inspection reports, nine on "destruction, removal and rendering harmless," nine on Ongoing Monitoring and Verification (OMV) and 18 consolidated reports (after April 1996); see Gudrun Harrer, *Dismantling the Iraqi Nuclear Programme: The Inspections of the International Atomic Energy Agency, 1991–1998* (London and New York: Routledge, 2014), pp. 90–91.

^d After September 1991 also sent to General Conference (GC) and BOG.

^e Presented to BOG in July and September 1991.

^f Inspections began May 1992 and Director General (DG) reported results orally to Board in June. First publicly available report from DG to GC dated August 16, 1993.

^g Based on assumption that IAEA website list is comprehensive and broken links are reports not publicly available. Figure includes DG reports to the BOG publicly unavailable, but referenced in GC reports from 1993–2001, and reports known to exist from 2002–present, plus a presumed 10 earlier inspection reports between 1992 and 1999 http://cns.miis.edu/archive/country_north_korea/nuc/iaea9799.htm (accessed September 30, 2015).

^h See "IAEA Reports," <https://www.iaea.org/newscenter/focus/dprk/iaea-reports> (accessed September 23, 2015). Links to some reports are broken. A link to the August 14, 2006 report from DG to GC does not appear on IAEA Reports page but does appear on IAEA and DPRK Chronology of Events page. July 3, 2007 Board Report available at <http://isis-online.org/iaea-reports/category/korean-peninsula/#2007> (accessed September 30, 2015). See also <https://www.iaea.org/About/Policy/GC/GC59/Documents/> (accessed September 30, 2015).

ⁱ Reports available at <https://www.iaea.org/newscenter/focus/iran/iaea-and-iran-iaea-reports> (accessed September 30, 2015).

^j First Board report available dated February 20, 2004; report of December 22, 2003 (GOV/2003/82) not available on IAEA website. From 2005–September 2008 updates on Libya included in SIR.

^k Four reports available at <http://isis-online.org/iaea-reports/category/libya/> (accessed September 23, 2015).

^l It appears that inspections from late August 2004–November 2004 generated only one report. DG's September report to the BOG appears to have been oral.

^m See <http://www.globalsecurity.org/wmd/library/report/2004/index.html> (accessed September 23, 2015).

ⁿ Report available at http://www.globalsecurity.org/wmd/library/report/2005/egypt_iaea_gov-2005-9_14feb2005.pdf (accessed September 23, 2015). No other reports until 2008 SIR (not publicly available).

^o Total does not include oral statement made by DG to BOG in September 2008.

^p Reports available (except August 28, 2013 BOG report) at <https://www.iaea.org/newscenter/focus/syria/iaea-and-syria-iaea-reports> (accessed September 23, 2015); August 28, 2013 Report available at <http://isis-online.org/iaea-reports/category/syria/> (accessed September 23, 2015).

Iraq (1991–2005)

The Iraq case was the first instance of a major safeguards violation being brought to the attention of the international community. The case did not follow the non-compliance pathway set out in the IAEA Statute and safeguards agreements but differed in several key respects.

First, the non-compliance was discovered by the IAEA only after Iraq had been defeated in war and after the UN Security Council had imposed mandatory requirements on the country to rid itself of all of its so-called weapons of mass destruction capabilities—chemical, biological, and nuclear, as well as missile delivery systems. Rather than waiting for the IAEA to verify non-compliance, the Council appeared to simply assume that Iraq was already in non-compliance with its obligation under the NPT to not seek to acquire nuclear weapons. Resolution 687 of April 1991, which imposed the disarmament obligations on Iraq, seemingly relied on intelligence information for this assumption. In its preamble the resolution said the Council was “concerned by the reports in the hands of Member States that Iraq has attempted to acquire materials for a nuclear-weapons programme contrary to its obligations” under the NPT.⁴⁰

Second, it was the Security Council, not the IAEA’s Board of Governors, that mandated the special Iraq nuclear verification tasks. Moreover, the Council tasked the Director General Hans Blix, not the Agency itself, with carrying out the mission. The Council hoped in this way to bypass the Board to avoid it “interfering” in decisions on the case—the most important being determining Iraq’s return to compliance. The United States, in particular, was concerned that Iraq (which happened to be a Board member) and its supporters on the Board would play havoc with its decision-making processes. But in fact this maneuver did not prevent the Board becoming involved, almost from the outset, since it was still responsible for Iraq’s compliance with its CSA signed in 1968. IAEA reporting reflects the different masters it was answerable to.

Third, the Security Council gave IAEA inspectors unprecedented verification and monitoring powers beyond those available to it under Iraq’s CSA. Iraq was in turn obliged to provide unprecedented transparency, beyond that provided for in its CSA, about its past activities and full cooperation with the Agency. IAEA reporting on Iraq reflects these expansive verification powers and availability of additional information.

⁴⁰ UNSC Resolution 687 (1991), April 8, 1991.

Fourth, the Agency was charged with helping destroy Iraq's nuclear capabilities, not just assessing their extent. Such activities had to be accounted for, requiring an additional series of reports not envisaged in a standard non-compliance case (to the extent that there is such a phenomenon). The Agency was required not only to verify that Iraq had returned to compliance with safeguards on its existing nuclear infrastructure, as would normally be the case, but also to verify the dismantlement of that infrastructure. Future safeguards would thus be applicable to a vastly shrunken capability.

A fifth unique aspect of the Iraq case was that the Agency was required to collaborate with and rely for logistical and other support on two bespoke, short-lived verification bodies established successively by the Security Council to handle the non-nuclear aspects of Iraq's WMD programs. The relationship with the UN Special Commission, which operated between 1991 and 1998, was complex and in some respects fraught, which is reflected in IAEA reporting. There were even disagreements about what should be reported and when. After Iraq's separation of plutonium was discovered in August 1991 by IAEA 4 (inspections were numbered in simple chronological order), UNSCOM Deputy Director Robert Gallucci reported the information directly to the Security Council without waiting for IAEA Director General Blix's approval, apparently on the grounds that Blix may have been reluctant to tell the Council.⁴¹ The relationship with UNSCOM's successor, the UN Monitoring, Verification and Inspection Commission (UNMOVIC), which operated from 1999 to 2007, was less fraught, not least because Hans Blix was its Executive Chair.

A sixth reason why IAEA reporting on Iraq was different from subsequent non-compliance cases was because the Agency set up a special unit outside the Department of Safeguards, the Iraq Action Team (from December 1, 2002 the Iraq Nuclear Verification Office or INVO), to conduct its activities. The Team reported directly to Blix rather than through the Safeguards Department, as its work was not regarded as the application of safeguards under Iraq's CSA but a special operation carried out under the authority of the Security Council.⁴² The Agency has since replicated this approach in the case of Iran with the establishment of the Iran Task Force, although it is located in the Safeguards Department. There had indeed been discussion within the Agency and among member states as to whether the additional verification activities the Agency was being asked to perform in Iraq could properly be called safeguards.

41 Incident reported by Gudrun Harrer, *Dismantling the Iraqi Nuclear Programme: The Inspections of the International Atomic Energy Agency, 1991–1998* (London and New York: Routledge, 2014), pp. 90–91. Blix denies that he would have been reluctant, but UNSCOM Executive Chairman Rolf Ekéus reportedly shared Gallucci's suspicion.

42 Fischer, p. 276.

Reporting Obligations and Process

Due to the complexity and longevity of the Iraq non-compliance saga, the series of IAEA reports is voluminous, complicated, and in many respects *sui generis*. It is a pity from a precedential point of view that the first major safeguards non-compliance case was so unusual, since the Agency did not have a chance to flesh out the standard process envisaged in the Statute through a series of less irregular instances. Nonetheless, despite the material differences in circumstances between Iraq and later non-compliance cases, conclusions can be drawn from it for IAEA non-compliance reporting generally. Agency reporting on the Iraq case invariably set some precedents and standards that were followed subsequently. In any case, as will be seen, all non-compliance cases are unique in some respects, making the idea of a “normal” case somewhat illusory.

In Resolution 687 of April 8, 1991 the Security Council requested the Director General, with the “assistance and cooperation” of UNSCOM to carry out “immediate on-site inspections” of Iraq’s nuclear capabilities, based on Iraq’s declarations and the designation of any additional locations by UNSCOM.⁴³ He was also requested to develop a plan for submission to the Council within 45 days calling for the “destruction, removal, or rendering harmless as appropriate” of all items declared by Iraq and to carry out that plan within 45 days following Council approval. In addition he was to develop a plan for the “future ongoing monitoring and verification [OMV] of Iraq’s compliance” with its disarmament obligations once its past activities had been accounted for and neutralized.⁴⁴ This appeared to make the Security Council the sole recipient of reports.

Yet, despite the fact that the Security Council had initiated the case against Iraq and had attempted to bypass the Board, IAEA Governors wasted no time in getting involved. Director General Hans Blix clearly felt bound to keep the Board apprised of Iraq’s non-compliance with its CSA since it was a legally-binding agreement between Iraq and the Agency. Accordingly he presented to the Board a “Report by the Director General on Non-Compliance by Iraq with its obligations under the Safeguards Agreement with the Agency” as early as July 11.⁴⁵ This was informed by his consolidated report on the first two inspections under the Security Council mandate that he had sent to the Council on July

⁴³ UNSC Resolution 687 (1991), April 8, 1991, para. 13.

⁴⁴ This would include an inventory of all nuclear material in Iraq that should be subject to safeguards within 120 days.

⁴⁵ IAEA, *A Report by the Director General on Non-Compliance by Iraq with its obligations under the Safeguards Agreement with the Agency*, GOV/2350, (Vienna: IAEA, July 18, 1991).

11, but its content was quite different.⁴⁶ The consolidated report to the Council made no judgment on compliance but simply reported “evidence” of various activities. The report to the Board was more judgmental, ending with: “It is concluded, therefore, that Iraq has not been in compliance with its obligations under the Safeguards Agreement with the IAEA, in particular with respect to the obligation to accept safeguards on all nuclear material in all peaceful nuclear activities in Iraq.”⁴⁷

The Board in response adopted a resolution at a special meeting on July 15, 1991. It found that, on the basis of the Director General’s report, Iraq had “not complied with its obligations under its safeguards agreement with the Agency (INFCIRC/172).”⁴⁸ The resolution declared that, in accordance with Article XII.C of the Statute, the Board had decided to report “this non-compliance” to the Security Council (even though the Council was already well aware of the situation), as well as to all member states of the IAEA and the UN General Assembly. The Board called on Iraq to “remedy this non-compliance forthwith ... in accordance with the relevant provisions of Iraq’s CSA.” In addition, the resolution referenced Articles XII.C and XIX.B of the Statute in declaring that the Board would “consider appropriate action” in the event of Iraq “failing to take fully corrective action.” The resolution was sponsored by 17 states, including the five permanent members of the Security Council. The vote was 31 in favor, one against (Iraq, which happened to be serving on the Board) and three abstentions (Cuba, Nigeria, and Tunisia). This was the first finding of non-compliance with a safeguards agreement in the history of the IAEA and the first time a case had been reported to the UN Security Council. The relevant provisions of the Statute and the state’s CSA had been cited.

On September 12, 1991, in response to a second (and last) report on Iraq by the Director General exclusively to the Board,⁴⁹ the Governors concluded that there was evidence of “further non-compliance by Iraq” but did not adopt another resolution. The Board simply reaffirmed its earlier resolution and requested the Director General to report the new evidence of non-compliance as required under Article XII.C of the Statute.⁵⁰

In September 1991 the General Conference of the IAEA got into the act. It condemned Iraq’s non-compliance with its non-proliferation obligations, including those contained in

46 UNSC, *Consolidated Report on the First Two IAEA Inspections under Security Council resolution 687 (1991) of Iraqi Nuclear Capabilities*, July 11, 1991, attached to Note by the Secretary-General to the Security Council, S/22788, July 15, 1991.

47 GOV/2350, para. 13.

48 GOV/2532, July 18, 1991.

49 IAEA, *A Report by the Director General on Non-Compliance by Iraq with its obligations under the Safeguards Agreement concluded with the Agency*, GOV/2350/Add.1, (Vienna: IAEA, August 9, 1991).

50 For details and relevant documents see IAEA, *Iraq’s Non-Compliance with its Safeguards Obligations*, GC(XXXV)/978, (Vienna: IAEA, September 16, 1991).

its safeguards agreement, and asked the Director General to report to it at its next session, and to the Board, on his efforts to implement the Security Council's resolutions on Iraq.⁵¹ In the meantime Director General Blix engaged in a vigorous exchange of letters and documents with the Iraqi government.

The Director General thereafter submitted the same reports on Iraq to the Security Council, the Board, and the General Conference.⁵² These were all made publicly available. There were no special reports to the Board after 1991. All of the reports covered Iraq's compliance (or continuing non-compliance) with its Security Council-mandated obligations and, either implicitly or explicitly, its CSA obligations. They also reported on how the Agency was carrying out its mission.⁵³ Iraq was also given a special section in the annual SIR.

After the initial flurry of reports which described individual campaigns of inspections and set out the verification plans, future reporting was regularized by the Council. Six-monthly reports were to be submitted on the progress of implementation of the plan to "destroy, remove or render harmless" Iraq's nuclear capabilities. After April 1992, six-monthly reports were also required on the implementation of the Ongoing Monitoring and Verification (OMV) plan.⁵⁴ In 1996 the Council further reduced the reporting workload to two "consolidated reports" each year. Additional reports were required in extraordinary circumstances, for example in 1998 when Iraq refused to cooperate further with the IAEA and UNSCOM and the United States and United Kingdom carried out bombing raids to induce it to comply. Today the IAEA website helpfully divides the Iraq reports to the Council into the following categories:⁵⁵

- Agency reports and correspondence (these include letters on specific issues that the IAEA felt it needed to communicate to the Council, including verification activities)
- Consolidated reports (under paragraph 16 of UNSCR [United Nations Security Council Resolution]/1051/1996)
- Reports on the plan for OMV (under paragraph 12 of UNSCR 687/1991)

51 Adopted 71 votes to one (Iraq), with seven abstentions (Algeria, Cuba, Jordan, Libya, Morocco, Namibia, and Sudan). See IAEA, GC(XXXV/OR.341, paras 76-78, reproduced in IAEA, *The Implementation of United Nations Security Council resolutions 687, 707 and 715 (1991) relating to Iraq*, GOV/2816-GC(39)/10, (Vienna: IAEA, August 2, 1995).

52 From 1993 onwards, the reports were specifically designated as reports to the Board and General Conference and labeled, less provocatively and perhaps more optimistically, "The Implementation of Security Council resolutions 687, 707 and 715 relating to Iraq." See IAEA, *The Implementation of Security Council resolutions 687, 707 and 715 relating to Iraq: Report of the Director General*, GOV/2677-GC(XXXVII)/1069, (Vienna: IAEA, August 26, 1993).

53 Harrer has summarized the IAEA reporting process in the Iraq case from 1991-1998 and the following draws substantially on her work. Harrer, pp. 41-43.

54 UNSC Resolution 715 (1991), October 11, 1991.

55 See "IAEA and Iraq."

- Reports on the implementation by the IAEA of the plan for the destruction, removal and rendering harmless of items (listed in paragraph 12 of UNSCR 687/1991)
- IAEA reports on On-Site Inspections in Iraq (under UNSCR 687/1991).

The preparation of each draft report, according to Gudrun Harrer, was primarily the responsibility of the Action Team leader (and presumably later, the head of INVO).⁵⁶ Along with the inspection team members, internal staff, and outside experts, the leader put all the technical components together, using as a basis the Daily Inspection Reports from Baghdad, where the Agency had set up its “Nuclear Monitoring Group.”⁵⁷ From the beginning of its inspection activities in May 1991 the Action Team began sending reports to the Director General, copied to UNSCOM (sometimes, due to the time difference between Vienna and New York they reached UNSCOM first).⁵⁸ Remarkably, these were also provided, in raw form, to the Security Council under cover of a letter from the Director General, transmitted by a note from the UN Secretary-General.⁵⁹ The Action Team leader also informally briefed representatives in Vienna of the five permanent members of the Security Council.⁶⁰

According to Harrer, “technical disagreements within the Action Team about the interpretation of findings were rare: consensus was normally not difficult to reach.”⁶¹ She records that there was only one conspicuous case of disagreement remembered by the Action Team. After IAEA Inspection 4 one expert did not agree with the others that the site of Al-Atheer had the potential to be a “complete and sufficient potential nuclear weapons laboratory.” The majority opinion later turned out to be right. She notes that perfect unanimity in verification assessment groups could raise suspicions that “dissenting voices were quickly silenced by the majority.”⁶² Group-think is common in such situations, through such phenomena as “first entry advantage” (in which the first person to speak sets the tone and content of the group conclusion). On the other hand, the prevalence of consensus could simply have meant that the evidence was indisputable. Such dilemmas were later to inform the state evaluation process under strengthened safeguards post-Iraq.

⁵⁶ Harrer, p. 41, 90.

⁵⁷ In Baghdad the coordinating inspector of each group (the inspection team was split into groups with different tasks or specializations) wrote a report each evening summarizing the day’s activities and events (Harrer, p. 42).

⁵⁸ This caused some difficulties as by the time the daily reports were finished in Baghdad’s evening hours, the IAEA offices in Vienna were closed, while those of UNSCOM in New York were open and ready to dissect the reports and brief the permanent five members of the UN Security Council before the IAEA had a chance to read them (see Harrer, p. 90).

⁵⁹ See for example, UNSC, Note by the Secretary-General, S/22788, July 15, 1991.

⁶⁰ According to Richard Hooper, quoted by Harrer, p. 42.

⁶¹ Harrer, p. 42.

⁶² Harrer, p. 42.

After agreement at the technical level, the drafts were vetted by the Legal Division and the Office of External Relations and Policy Coordination (EXPO) prior to being submitted to the Director General, who would approve them “with or without changes.”⁶³ The procedure was formalized in 1997 when Mohamed ElBaradei became Director General, through the creation of the Iraq Coordination Committee (ICC). It comprised the Action Team Leader, the Director General’s *Chef de Cabinet*, the Directors of the Legal Division, EXPO, the relevant Division of Safeguards Operations, and the Division of Public Information. Not everybody was reportedly pleased by this development.⁶⁴ Some were suspicious of the involvement of the Director General’s Office in crafting reports before they reached the Director General himself.

Once agreement was reached in the ICC and the Director General approved the report it was transmitted to the Security Council. A press release was issued in conjunction with the submission of each report in order to prevent media “misrepresentation” of its content.

Evolution of the Reports

Reporting evolved significantly during the Iraq experience. The report on the results of the first inspection (IAEA 1) was never issued because it was overtaken by the dramatic findings of IAEA 2, when it became clear that Iraq was indeed carrying out significant undeclared nuclear weapons-related activities. The findings of the two inspection missions were consolidated into one.⁶⁵ The report on IAEA 1, according to David Kay, would have been understated in the normal style of IAEA safeguards reports, simply affirming that the team had seen “everything, and they, the Iraqis, have nothing.”⁶⁶ According to Kay it was only under pressure from three UNSCOM experts that some caveats were included. Richard Hooper, who later became the “scribe” of the team, describes the first report as a “typical safeguards report, cryptic and without details.”⁶⁷ Later the reports became “representative of what the Action Team was learning and the work which was done.”⁶⁸

Organizational learning was rapid. The Action Team’s reports soon became more comprehensive, detailed, skeptical, and probing—in short “tougher” on Iraq—emulating those of the

63 Harrer, p. 41.

64 Harrer, p. 42. The first Action Team leader, Gary Dillon, reportedly saw it as an unnecessary formalization and complication of the process, perhaps even limiting his prerogatives. His successor, Jacques Baute, saw the ICC more positively, as the Agency’s ratification of his decisions.

65 S/22788.

66 Interviewed by Harrer, see p. 42.

67 Interviewed by Harrer, see p. 42.

68 Harrer, p. 42.

allegedly more free-wheeling UNSCOM. Traditional IAEA safeguards culture⁶⁹ was based on the principle that information provided by a state and collected by the IAEA was to be treated as “safeguards confidential” and therefore reports were to be kept to the absolute minimum. This did not comport with the sudden need to report in a publicly open way to the Security Council.

The IAEA’s culture also inclined inspectors to not report problems they could not solve—in order to give the state a chance to resolve a non-compliance matter first. UNSCOM, with a more aggressive posture towards Iraq, reported all problems (the more the better, as that made them look more efficient).⁷⁰ The Action Team was apparently advised by one UN member state that “you are not here to solve the problem, you are here to tell the Security Council about the problem.”⁷¹ Since Iraq was the only state whose non-compliance UNSCOM had to be concerned with, it was not, unlike the IAEA, worried about setting precedents that might have an impact on its member states (since it had none).⁷²

In October 1997 the Agency, after six long years of inspections, issued a new type of “consolidated” report. It was not just a presentation of developments over the previous six months, but a comprehensive, 95-page overview of IAEA activities since the beginning of inspections in May 1991, including a chronology of major events. The forerunner of similar large, comprehensive reports on Iran, they were designed to summarize the elements of the non-compliance case and the progress (or lack of it) in resolving them.⁷³ One of the motivations of Gary Dillon, head of the Iraq Action Team, in suggesting such a report in the Iraq case was to draw a clean line between the reports of Hans Blix, who was about to retire, and Mohamed ElBaradei, who was about to replace him. Another reason was to explain why it had taken the IAEA six years to decide that Iraq no longer had a clandestine nuclear weapon program.

Getting wind of the idea, the United States and United Kingdom, fearing that the report would sound too positive, dispatched their ambassadors to advise Blix to “stick to the facts” and leave the compliance conclusions to the Security Council. This somewhat contradicts previous U.S. criticism of the Agency’s tendency to speak of “areas of concern,”

69 See Findlay, *IAEA Safeguards Through a Cultural Lens: Power, Planning, and Habit*.

70 According to Jacques Baute, interviewed by Harrer, p. 43.

71 According to Jacques Baute, interviewed by Harrer, p. 43.

72 As a body established by the Security Council it had no members, but a Board of Commissioners dominated by the P5 and its Chair, Rolf Ekéus of Sweden, succeeded by Richard Butler of Australia.

73 For example, see IAEA, *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2004/83, (Vienna: IAEA, November 15, 2004).

rather than employing stronger language.⁷⁴ The latter is more in line with what the Bush administration later sought in the Iran case, where it pressed the Secretariat to draw a non-compliance conclusion using the word “non-compliance.”

The case illustrates that the Agency can be in a no-win situation when crafting non-compliance reports. It is sometimes criticized for being too cautious, using obscure “technical,” legalistic language, and being unwilling to draw a definitive non-compliance conclusion, while at other times it is criticized as being too bold in its conclusions. In its defense the Agency has long pointed out that:⁷⁵

Since the early years of implementation of comprehensive safeguards agreements by the Agency, it has been recognized that securing absolute proof of compliance (or otherwise) of a State with the terms of its Safeguards Agreement is not possible, and that “reasonable” inferences must be drawn in making conclusions, taking into account all available information.

Drafting of the October 1997 comprehensive report proved problematic, in particular with regard to the Agency’s assessment of Iraq’s purported Full, Final and Complete Declaration (FFCD), demanded by the UN Security Council. Harrer reports that Blix felt that some of the outstanding questions listed by Gary Dillon in the proposed critique of the FFCD were “very petty and not really worth mentioning.”⁷⁶ Consequently the list was “boiled down to points Blix felt really were still open,” for example the procurement offer to Iraq by the A.Q. Khan network. The Americans reportedly wanted more issues kept open, but the Secretariat refused. Bob Einhorn, then Under Secretary of State for Non-Proliferation, made several trips to Vienna in 1997 to go through a list with Dillon, systematically contesting all of the issues Dillon wanted to “close.” Critics of the Secretariat also objected to the use of the term “areas of concern” rather than something stronger.⁷⁷

The Secretariat on the other hand, also refused to give in to the demands of the French, Russians and Chinese that the Agency confine its verification efforts to OMV. The Agency had paid greater attention to OMV as it became more confident that it had a coherent picture of Iraq’s past activities and as destruction of the existing infrastructure proceeded. But

⁷⁴ Harrer, pp. 222-223.

⁷⁵ IAEA, *Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System: Proposals for Implementation under Complementary Legal Authority*, GOV/2107, para. 3(2) and GOV/2863/Corr.2, March 1995, paras 31 and 32, referenced in IAEA, *Implementation of the NPT Safeguards Agreement in the Syrian Arab Republic: Report by the Director General*, GOV/2011/30, (Vienna: IAEA, May 24, 2011). fn 10.

⁷⁶ Harrer, p. 223.

⁷⁷ Interview by Harrer with Gary Dillon, May 8, 2005, quoted in Harrer, p. 223.

it rightly wished to retain the flexibility to return to its “old inspection mode” should the need arise. The incident illustrates both the dynamics within the Secretariat in preparing non-compliance reports and the external pressures that it may face from interested member states. Fortunately, the Secretariat is able to take advantage of contrary views among its member states to give it freedom of maneuver to produce a balanced report.

The difficulty with the IAEA coming anywhere near to declaring that Iraq was now back in compliance and closing the nuclear file was that the United States did not want to give Iraq and other Security Council members “ammunition” to support the lifting of sanctions. This was despite the fact that there were significant unresolved issues in UNSCOM’s chemical, biological and missile files that would in any case have prevented that. Blix informally suggested to Council members in 1997 that they could declare that the disarmament goals of Resolution 687 in the nuclear field had been met. However, conceding that it was for the Council to make such a decision, not the IAEA, he only ventured in his official reporting that there was no significant discrepancy between the “technically coherent picture” the Agency had compiled and Iraq’s latest declaration.⁷⁸ His successor, ElBaradei, submitted a report in 1998 that reached “essentially the same conclusion.”⁷⁹ Jacques Baute, IAEA inspector and former head of INVO, says that:⁸⁰

We hinted to the SC (security council) that the disarmament phase was finished for us, not because we knew everything—we still had questions and concerns—but because it was not making any more sense from a resource point of view to focus on the past.

This illustrates another of the perennial dilemmas of non-compliance reporting, one that has re-emerged periodically in the Iran case: when should the IAEA declare that a return to compliance has occurred and the “normal” safeguards regime can be reinstated? And who should declare it, the Secretariat or the Board? Already in the Iraq case one can see the slippage of language: sometimes the term “IAEA” is meant to mean the Secretariat, at other times the Board, and at still other times ambiguity is intended. The Iraq case also illustrates the political pressure that will be applied if the Agency appears likely to issue the “wrong” compliance conclusion.

In December 1998 IAEA inspectors were obliged to leave Iraq prior to the bombing campaign (Operation Desert Fox) carried out by the United States and United Kingdom. After the bombing ended Iraq declined to readmit them. Subsequent reporting by the Director General was based on sources other than inspections and decreased in detail accordingly.

78 Hans Blix, *Disarming Iraq: the Search for Weapons of Mass Destruction* (London: Bloomsbury, 2005), p. 28.

79 Blix, p. 229.

80 Quoted in Harrer, p. 225.

IAEA Reporting in the UNMOVIC Era and Beyond

IAEA inspectors returned to Iraq in November 2002, their team renamed INVO, after an almost four-year absence. Operating in cooperation with UNSCOM's replacement, UNMOVIC, their reports to the Security Council based on inspections resumed briefly. These ended with the coalition invasion of Iraq and the withdrawal of IAEA inspectors in March 2003.

Security Council Resolution 1441 of November 8, 2002 reinstated the inspection regime in Iraq, referring to non-compliance and compliance in its preamble and "continued violations" in its operative part. It also introduced a new term, "material breach," into the lexicon. Iraq was required to provide a "currently accurate, full, and complete" declaration of all aspects of its weapons programs, the nuclear part of which the IAEA would be required to verify. Omissions or false statements about its programs and failures to comply with and fully cooperate "immediately, unconditionally and actively with the IAEA and UNMOVIC" would constitute a "material breach."⁸¹ As Hans Blix, former head of UNMOVIC, notes, neither body ever did submit a report on any "material breach" to the Council before the 2003 invasion of Iraq.

The Security Council's requirement does raise the issue of how much non-cooperation with a verification body warrants a charge of non-compliance, a difficulty that has also arisen in the Iran, North Korea, Syria and other cases. Blix recalls being asked in a television interview what in his view would merit such a report. He says that although it was clear to him that he would not submit a special report about trivial matters, he did not want to send the Iraqis any reassuring message that they could obstruct inspectors in minor ways without consequences.⁸²

... if an inspection team en route is delayed by a flat tire on one of the minders' cars, it is an accident, but if there are two or three flat tires on the same trip, it may be serious. But, said the TV anchor, where do you draw the line? And I answered, "Somewhere between one and two." It was a flippant response to a question which had no good short answer, especially not one that the Iraqis could hear.

After the coalition invasion of Iraq in 2003 and throughout its occupation by coalition forces, non-compliance reporting by the IAEA ended in a whimper. The coalition authorities refused access to IAEA inspectors (except for a discrete operation in June 2003 to secure and remove radiological and nuclear materials) and member states failed to report imports of Iraq-source equipment and materials that were being illegally removed from the country as law and order collapsed. Agency efforts had been sidelined by the U.S.-led Iraq Survey Group's continuing fruitless search for Iraq's supposed WMD.

⁸¹ UNSC Resolution 1441 (2002), November 8, 2002, paras 1 and 4.

⁸² Blix, p. 150.

The Director General nonetheless continued to provide consolidated reports to the Security Council every six months, as requested, but in the form of a letter to the President of the Council, drawing principally on open sources and satellite imagery.⁸³ Following the transfer of responsibility for governing Iraq to the Interim Government on June 30, 2004, the IAEA resumed contacts with and assistance to the Iraqi authorities. The last regular report by the Director General to the Council was on October 13, 2005.⁸⁴ By that point the Agency had resumed normal verification and reporting activities in respect of Iraq's shrunken nuclear holdings, as declared under its extant CSA. INVO was reduced to a minimum staffing level. The Director General's letter hints at the Secretariat's deep disappointment at the lack of international support for the Agency's work to wrap up the Iraq case satisfactorily.

On June 29, 2007, more than sixteen years after it had adopted Resolution 687, the Security Council finally put the Agency out of its misery by adopting Resolution 1762, which terminated the mandate of the IAEA in Iraq under previous resolutions. It did not however declare Iraq to be back in compliance, a matter that was particularly important in order that Security Council sanctions be removed (there are foretastes here of the current Iran case).⁸⁵ IAEA legal advisor Laura Rockwood reportedly told U.S. officials who enquired in 2009 that although there was no question that the Secretariat now regarded Iraq as in compliance, this had not been formally communicated to member states and/or the Security Council. She confirmed that there was no set process for bringing a non-compliance case to closure. One possibility was a request by letter from a member state that would trigger a discussion within the Secretariat on whether such a decision should be made by the Board of Governors or the Director General. The U.S. mission to the IAEA recommended a Board decision instead of just relying on a "proclamation" by the Director General, a principle that the U.S. had "sought to begin to establish" with the Libya resolution in 2008 (see Libya case study). By this time the cases of Iran and Syria were also clearly at the forefront of U.S. thinking.

In the end a Board resolution did not eventuate. Instead, no doubt at U.S. and Iraqi urging, Director General Yukiya Amano, who had succeeded ElBaradei in 2009, sent a letter to the Security Council dated March 11, 2010. It noted that the Agency had been receiving "excellent cooperation from Iraq in the implementation of its comprehensive safeguards agreement" and that Iraq had agreed to provisionally apply its AP pending its entry into force. Combined with favorable Iraqi action in regard to other types of WMD and delivery systems, this permitted the Council to end all sanctions on Iraq in respect of WMD in December 2010.⁸⁶

83 UNSC, Letter dated October 1, 2004 from the Secretary-General addressed to the President of the Security Council, S/2004/786, October 4, 2004.

84 UNSC, Letter dated October 14, 2005 from the Secretary-General addressed to the President of the Security Council, S/2004/652, October 17, 2005.

85 "IAEA/Iraq: formally finding Iraq in compliance with its safeguards agreement," cable from U.S. Mission, Vienna to State Department, April 29, 2009, released by Wikileaks, posted on Public Library of U.S. Diplomacy, https://www.wikileaks.org/plusd/cables/09UNVIEVIENNA193_a.html (accessed September 30, 2015).

86 UNSC Resolution 1957 (2010), December 15, 2010.

Romania (1992)

In late April 1992 the new government of Romania requested a special inspection “without delay” due to its discovery that under the regime of Nicolae Ceaușescu the country had likely violated its comprehensive safeguards agreement dating from 1968. The previous government had failed to declare the reprocessing of 100 milligrams of plutonium in 1985 from the TRIGA research reactor at the Pitești Nuclear Research Institute.⁸⁷ The inspection was conducted in early May, confirming the details volunteered by Romania. This was only one of a few times a special inspection had been formally conducted, although not in the circumstances originally envisaged.⁸⁸

A single, oral, report on the case and the result of the special inspection was made by Director General Blix to the Board of Governors on June 16, 1992.⁸⁹ Blix reported to the Board that the special inspection had confirmed such illicit activities, and that, under Romania’s safeguards agreement, this should have been reported to the Agency at the time but was not until the new government took power. He is reported to have used the term “non-compliance.”⁹⁰ The Record of the Meeting records Blix saying that he was acting in accordance with Article XII.C of the Statute, which required him to report “any non-compliance.” He affirmed that even though the safeguards system “was not designed to detect deviations involving very small quantities of nuclear material” this “did not absolve States with safeguards agreements from scrupulously observing the terms of the agreements.” At least one Governor, Michael Wilson of Australia, noted that “any such instance of non-compliance was a serious matter.”⁹¹

The following day, in a statement on behalf of the Board, the Chair, the Governor from Argentina, Mr. Manuel Mondino, said that the Board had “taken note of the Director General’s report concerning non-compliance by the former regime in Romania with

87 The matter was revealed at the end of April 1992 during reorganization of the institute when two vessels containing approximately 470 milliliters of solution and a new quantity of about 100 milligrams of plutonium were found outside the facility’s “material balance area” (Ann MacLachlan, “Romania separated tiny amount of plutonium in secret in 1985,” *Nucleonics Week*, Vol. 33, No. 26, June 25, 1992, p. 16). The CSA provides for material up to certain quantities to be exempted from safeguards. The Romanians had asked the IAEA to exempt a small quantity of spent fuel and had then conducted plutonium separation experiments in a hot cell. There have been similar breaches by others, including Iraq and Iran. As a consequence the IAEA is now much more careful about exemptions and inspection procedures include environmental swipes at hot cells (background from John Carlson, email, June 27, 2015).

88 David Fischer, author of a semi-official history of the Agency, claimed that before 1991 the IAEA had “apparently” carried out “one or two special” inspections but not at an undeclared site (Fischer, p. 318, fn 124). He mentions it only in that footnote and one other (Fischer, p. 321, fn. 152). Laura Rockwood recalls being informed by the Safeguards Department that prior to 1991 the IAEA had formally carried out three special inspections, all of them to declared sites (private communication with the author, July 22, 2015).

89 IAEA, Record of GOV/OR Meeting 780, Tuesday, June 16, 1992, at 10:05 a.m.

90 Confirmed, for instance, by Laura Rockwood, email message to author, July 22, 2015.

91 IAEA, Record of GOV/OR Meeting 780, Tuesday, June 16, 1992, at 10:05 a.m.

certain provisions” of its safeguards agreement.⁹² He expressed the Board’s appreciation to the current Romanian government for having brought the matter to the Board’s attention immediately upon “discovery of the non-compliance.” He said it was his understanding that the Board, on the basis of the Director General’s report, was satisfied that corrective action had been taken and wished, “in accordance with Article XII.C of the Statute, to request the Director General to report the matter to the Security Council and the UN General Assembly for information purposes.” This was the same formulation used in the Libya case ten years later. In a letter to the UN Secretary-General, which requested him to circulate it to the Security Council and General Assembly, Blix referred to his “report of non-compliance” to the Board, on the basis of which it had decided to report the matter “for information purposes.”⁹³

Little publicity was given to the case at the time or subsequently. Unlike other non-compliance cases, Romania does not have a special section on the IAEA website explaining the case. The Safeguards Statements for 1992 and 1993, incorporated in the Agency’s annual reports for those years, make no mention of it. Nor does the comprehensive verification chronology for 1992 compiled by the London-based non-governmental organization (NGO), the Verification Research, Training and Information Centre (VERTIC).⁹⁴ The Secretariat was pre-occupied with the Iraq, North Korea, and South Africa verification cases at the time, but it is still puzzling that little publicity was given to the Agency’s use of a special inspection, even if only for demonstration purposes.

One senses a certain reluctance to draw attention to the case. Mohamed ElBaradei says bluntly the aim of the new Romanian government in seeking the special inspection was “to further discredit the former Communist president.”⁹⁵ John Carlson suggests that ElBaradei, then Blix’s advisor, was reluctant to call what had taken place a special inspection as he envisaged that these were meant to be at the request of the IAEA, not the state.⁹⁶ Such inspections were also supposed to be used in cases where there were suspicions of non-compliance at an undeclared site or part of a declared site, not one to which the state led inspectors. However, paragraph 73(a) of INFCIRC/153 authorizes the Agency to carry out special inspections to verify information contained in “special” reports submitted by a state. As indicated in Blix’s letter to the Secretary-General, the special inspection in Romania was triggered by such a special report from the Romanian authorities.

⁹² IAEA, Record of GOV/OR Meeting 738, Wednesday, June 17, 1992, at 3:10 p.m.

⁹³ Letter dated July 2, 1992 from the Director General of the International Atomic Energy Agency to the Secretary-General, Annex, UN General Assembly/UNSC, A/47/320-S/24262, July 10, 1992.

⁹⁴ J.B. Poole and R. Guthrie (eds), *Verification 1993: Peacekeeping, Arms Control and the Environment* (London: Brassey’s/VERTIC, 1993), pp. 11–22.

⁹⁵ ElBaradei, p. 42.

⁹⁶ John Carlson, email message to author, May 28, 2015.

North Korea (1992–Present)

Unlike the Iraq and Romania cases, North Korea was the first non-compliance case to roughly follow the non-compliance procedure laid out in the Statute and CSAs. But it also departed from the expected standard non-compliance model in several respects and deviated more as the case progressed.⁹⁷ Non-compliance reporting by the Agency was obliged to adapt to the twists and turns of the case, involving not just the Board of Governors and North Korea, but the Security Council, the UN General Assembly, the IAEA General Conference and influential member states, notably China and the United States. The Agency also had to take into account ad hoc agreements and forums, such as the 1994 Framework Agreement and Six-Party Talks, beginning in 2003, over which the Agency had little if any influence. Throughout the case, which still continues today, the Secretariat, through the Director General, has been expected to continue to report on non-compliance and on the requirements for monitoring, verification and a return to compliance by North Korea.

In contrast to the Iraq case, where the IAEA Secretariat sent voluminous and varied compliance reports to the UN Security Council, which in that instance was its *demandeur*, the Secretariat's reporting on the North Korea case was at first only to the Board of Governors. Also unlike the Iraq case it was initially confidential, restricted only to Board members. As envisaged in the Statute, once North Korea was explicitly found to be in non-compliance by the Board on April 1, 1993, the Secretariat's reporting broadened to include reports to all IAEA member states and to the UN Security Council and General Assembly.

Non-Compliance with the NPT and Early Suspicions of Nuclear Weapon Activities

Again unlike Iraq, North Korea was suspected of nuclear weapons activities even before its safeguards agreement was in force. After acceding to the NPT in December 1985 it was obliged under the treaty to conclude a safeguards agreement with the IAEA within 18 months. By declining to do so until April 1992, more than six years later, it was already in non-compliance with the NPT.⁹⁸ There was a widespread assumption that the delay was precisely because North Korea was engaged in activities that it would not wish safeguards

⁹⁷ Between 1992 and 2015 there were at least 12 formal written reports submitted by the Director General exclusively to the Board. Only one of these is publicly available, that of July 3, 2007, so a detailed analysis of all of them is impossible. After August 2007 reports were submitted to both the IAEA General Conference and the Board and were therefore publicly available.

⁹⁸ Neither the Director General, Hans Blix, nor the Board moved to declare North Korea in non-compliance with the NPT, since the IAEA is charged only with verifying non-compliance with safeguards agreements concluded pursuant to the NPT. Bizarrely, the NPT itself lacks a compliance mechanism.

inspections to uncover. Thus, unlike other cases, the international community and the IAEA were alert to potential compliance problems from the outset.

The Board in response adopted a resolution in September 1991 calling on North Korea to conclude its safeguards agreement as soon as possible.⁹⁹ Unusually, Blix himself, accompanied by legal advisor and future Director General ElBaradei, visited North Korea prior to the first IAEA inspection in order to lay the groundwork for the successful implementation of safeguards. Both the Director General and William Dirks, IAEA Deputy Director General, said even before the safeguards agreement entered into force that the IAEA would report to the Security Council if North Korea failed to list all of its nuclear facilities for inspection.¹⁰⁰ At its February 24–26, 1992 meeting the Board reaffirmed the IAEA's right to conduct special inspections, a move that was widely seen as being partially aimed at strengthening the Agency's authorities to deal with North Korea.¹⁰¹ The stage was already set for a non-compliance crisis.

Speed of the Non-Compliance Case Prompts Early Reports to the Board

A notable feature of the North Korea case is the speed with which the non-compliance issue arose, resulting in an intense series of reports to the Board and the adoption of several Board resolutions almost immediately. The Board was officially “seized” of the non-compliance issue by February 1993 and passed its first non-compliance resolution on North Korea¹⁰² less than a year after the DPRK's safeguards agreement was deposited with the IAEA.

North Korea's initial declaration of its nuclear holdings, as required under its safeguards agreement, although presented ahead of schedule on May 4, 1992, was soon found to be incomplete. It did not mention that plutonium had been reprocessed at its Yongbyon facility and did not list the reprocessing facility being constructed. The first IAEA inspections in North Korea took place from May 25 to June 7, 1992. When the IAEA analyzed the plutonium

99 And the Subsidiary Arrangements to that agreement. See DPRK Chronology, http://cns.miis.edu/archive/country_north_korea/nuc/iaea91.htm (accessed June 30, 2015).

100 Mark Hibbs, “Pyongyang still not reporting reprocessing unit at Yongbyon,” *Nucleonics Week*, April 23, 1992, pp. 15–16; *Reuters*, April 13, 1992; David E. Sanger, *New York Times*, April 10, 1992, p. A3, cited in North Korea Chronology, http://cns.miis.edu/archive/country_north_korea/nuc/iaea92.htm (accessed May 19, 2015).

101 In a statement by the Chair of the Board, Manuel Mondino of Argentina, the Board said it reaffirmed the IAEA's “right to undertake special inspections, when necessary and appropriate, and to ensure that all nuclear materials in peaceful activities were under safeguards.” The Board anticipated that “these special inspections should only occur on rare occasions” (*The Arms Control Reporter*, 1992, p. 602.B.216).

102 Board of Governors resolution, GOV/2636, February 23, 1993. See excerpt from the Records of the Board's 824th and 825th meetings, IAEA, GC(XXXVII)/1084/Add.1, (Vienna: IAEA, September 26, 1993), Attachment 1, p. 1.

declared by the DPRK, it was evident that it had been irradiated at a time that was inconsistent with the DPRK's declarations.¹⁰³ The Director General threatened the North Koreans with a special inspection if they did not uphold their obligations under their safeguards agreement.¹⁰⁴ This was the first time such a threat had been made.

Blix presented the first inspection report to the Board on June 15. As in the Iraq case, the Director General reported to the Board on the results of each round of inspections. During the third regular inspection, in September 1992, North Korea denied some IAEA inspectors access to its facilities at Yongbyon and blocked direct communication between IAEA headquarters and its inspectors.

A Flexible Approach to Non-Compliance Findings: the Statutory Approach Delayed

Another feature of the North Korea case was the flexible way in which the IAEA dealt with the case. Far from rigidly following the process set out in the IAEA Statute and the North Koreans' CSA, the Agency sought to give them every opportunity to reveal the truth about their undeclared activities and move rapidly back into compliance. Multiple rounds of discussions were held with the North Korean delegation in Vienna at various official levels (as well as bilateral talks between North Korea and interested member states, including Australia, China, and the United States).

During the fourth inspection, Director General Blix personally telephoned chief inspector Willi Theis at the Yongbyon nuclear complex about evidence of undeclared waste storage and instructed him to inform the North Koreans that they must declare these sites as nuclear facilities and permit inspections. Theis immediately summoned two senior nuclear officials at the Yongbyon facility and attempted to work with them to amend North Korea's initial declaration.¹⁰⁵ Blix also had meetings in Vienna with North Korean Nuclear Industry Minister Choe Hak-kun. In late December, in an attempt to work around the sensitive special inspections issue, Blix requested innocuous-sounding "visits" to clarify the nature of the two suspected nuclear waste sites at Yongbyon and to conduct tests.¹⁰⁶ The Agency at this stage was clearly giving North Korea the benefit of the doubt. One possible explanation of the suspected breach was the isolated state's ignorance of safeguards and international verification procedures.

¹⁰³ There was at least one undeclared reprocessing campaign earlier than that declared.

¹⁰⁴ ElBaradei, p. 40.

¹⁰⁵ Incident reported in Don Oberdorfer, *The Two Koreas: A Contemporary History* (Reading: MA: Addison-Wesley, 1997), p.275.

¹⁰⁶ Oberdorfer, p. 276. Then head of external relations Mohamed ElBaradei, accompanied by Sven Thorstensen and safeguards director for North Korea Olli Heinonen, visited (ElBaradei, p. 41).

Consistent with this flexible approach the Director General did not immediately and automatically use the word non-compliance in his reports, nor did the Board automatically find North Korea in non-compliance, even when convincing evidence was presented. It did not immediately report North Korea to the Security Council, but only when it had used the word non-compliance in a resolution.

North Korea was given multiple, continuing chances to demonstrate full cooperation. By the sixth inspection in February 1993, during which North Korea initially refused to allow inspectors access to its nuclear waste facilities, the IAEA had obtained evidence that the country's declaration of plutonium holdings was inaccurate as to source, amount, and type. After North Korea refused Blix's own request for a special inspection he sought Board approval for such an inspection at a special closed Board meeting on February 22, 1993.¹⁰⁷ It was at this meeting that U.S. intelligence information was shared with the Board, for the first time in the Agency's history. This information included satellite imagery showing a trench from the radiochemistry laboratory to an underground waste tank, the implication being that the tank held wastes from undeclared reprocessing. North Korea's ambassador was also shown the incriminating satellite imagery and other evidence, which he promptly labeled as fake.¹⁰⁸ ElBaradei notes that this development "served as a quiet milestone: in subsequent years, referring to the use of intelligence would become much more routine."¹⁰⁹ Another noteworthy part of the IAEA's process of handling a non-compliance allegation, not mentioned in the Statute or safeguards agreements but inaugurated in the North Korea case, is the oral briefings by the Director General and informal "technical" briefings by safeguards personnel to the Board.

Although strongly supported by France, the United Kingdom, and the United States the recommendation that the Board direct North Korea to accept a special inspection faced opposition from Brazil, China, India, and Russia.¹¹⁰ The resulting Board resolution of February 26, 1993, adopted unanimously, while not directly accusing North Korea of non-compliance, took "serious note" of "significant inconsistencies" between the DPRK's declarations and the "Secretariat's findings resulting from ad hoc inspections and sample analysis which remain unresolved despite extensive discussions."¹¹¹ It decided that access to the additional information and sites requested by the IAEA by means of

¹⁰⁷ ElBaradei calls it a "memorable, closed-door session with restricted attendance" (ElBaradei, p. 42).

¹⁰⁸ Oberdorfer, p. 277.

¹⁰⁹ ElBaradei, p. 43.

¹¹⁰ Mark Hibbs, "IAEA special inspection effort meeting diplomatic resistance," *Nucleonics Week*, February 18, 1993, pp.16–17. Blix decided to "pursue persuasion" with North Korea and therefore delay special inspections.

¹¹¹ IAEA Board of Governors resolution GOV/2636, February 26, 1993, see <https://ahlabauer.files.wordpress.com/2013/03/gov2636.pdf> (accessed September 30, 2015).

special inspections was “essential and urgent in order to resolve differences and to ensure verification of compliance.” It is notable how the resolution referred to the “Secretariat’s findings,” which is presumably what is envisaged in the Statute’s reference to “inspectors.” The resolution called for North Korea to achieve “full and prompt implementation” of its safeguards agreement, “urgently to extend full cooperation” to the IAEA, and “respond positively and without delay” to the Director General’s requests for access to additional information and two additional sites.

After telexing the North Koreans to seek agreement for the special inspections to proceed on February 11, 1993, Blix notified the UN Security Council that he had done so,¹¹² apparently to put the Council on notice that a non-compliance issue may be about to land on its agenda. This was prescient. On March 12, 1993 North Korea announced its withdrawal from the NPT, although in June it “suspended the effectuation” of its withdrawal.¹¹³ However Blix continued to act as if the North Koreans’ CSA remained in force and urged it to cooperate with the Secretariat and inspectors in resolving the issue. Meanwhile the Director General continued to seek to engage the North Koreans in a dialogue and gain inspector access.

The Statutory Path Followed: Non-Compliance Reported to Board and Council

On March 31, 1993 the Director General submitted a written report to the Board finding that a member state, North Korea, was in “non-compliance” with its safeguards agreement, the second time it had done so.¹¹⁴ Unfortunately the report is not publicly available, possibly because it contains sensitive information, so further details remain unclear. Based on the report the Board adopted a resolution on April 1 that found the DPRK “in non-compliance with its obligations under its Safeguards Agreement with the Agency.”¹¹⁵ The vote was 28 in favor, two against (China and Libya) and four abstentions (India, Pakistan, Syria and Vietnam).¹¹⁶ The resolution specifically cited Article XII.C of the IAEA Statute and

¹¹² Oberdorfer, p. 279.

¹¹³ IAEA, “Fact Sheet on DPRK Nuclear Safeguards,” <https://www.iaea.org/newscenter/focus/dprk/fact-sheet-on-dprk-nuclear-safeguards>: (accessed May 19, 2015), p. 2.

¹¹⁴ IAEA, *Report by the Director General on the Implementation of the Resolution Adopted by the Board on 25 February 1993 (GOV/2636) and of the Agreement between the Agency 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 (INFCIRC/403)*, para. 12 [number and document not publicly available] (Vienna: IAEA, March 31, 1993).

¹¹⁵ IAEA Board of Governors resolution GOV/2645, April 1, 1993, see <http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/Disarm%20GOV2645.pdf> (accessed September 23, 2015).

¹¹⁶ *The Arms Control Reporter*, 1993, p. 457.B.149.

Article 19 of the DPRK's safeguards agreement, as "requiring" that it report the non-compliance to all members of the Agency, the Council, and the UN General Assembly. It was the first time the Board had cited a specific article of a safeguards agreement providing for reports (the first Iraq resolution had just mentioned "relevant provisions" without specifying which ones), even though, as we have seen, the two documents are not necessarily in harmony. The Board was probably "covering all bases."

The Director General reported to the Security Council on behalf of the Board on April 6, 1993. The Council's immediate response, on April 8, was a bland Presidential Statement expressing concern about the situation and calling on the IAEA to continue its "constructive endeavors."¹¹⁷ It was only after more than a month of consultations among its deeply divided members that the Council, on May 11, 1993, adopted a resolution.¹¹⁸ It expressed regret over the Board's findings that "the DPRK is in non-compliance." Due to Chinese opposition it did not demand a return to compliance but simply "called upon" North Korea to do so. The Council added to the IAEA Secretariat's reporting obligations by asking the Board to report on its efforts to resolve the matter "in due time."

In June 1994, after North Korea sought to frustrate Agency verification by discharging large amounts of fuel from the Yongbyon reactor (pictured on the cover of this report), the Director General strengthened his non-compliance language by reporting that "the DPRK is continuing to widen its non-compliance with its safeguards agreement." The Board adopted this language in its resolution of June 10.¹¹⁹ This time it also suspended the Agency's non-medical technical assistance to North Korea. The Board again reported North Korea to the Security Council. North Korea promptly withdrew from the Agency on June 13, but the safeguards agreement remained in force and so the Agency continued to monitor its implementation to the extent that it could.

Reporting Non-Compliance to the IAEA General Conference and UN General Assembly

The North Korea case set a precedent for the IAEA General Conference and UN General Assembly becoming involved in a safeguards non-compliance case. As the IAEA Statute requires, the Board, through the Director General, informed both bodies of the case in April 1993 when it declared North Korea to be in non-compliance. The Director General

¹¹⁷ Statement by the President of the Security Council, 8 April 1993, S/25562, recorded as a Security Council decision in Resolutions and Decisions of the Security Council, 1993, p. 116.

¹¹⁸ UNSC Resolution 825 (1993), May 11, 1993.

¹¹⁹ IAEA Board of Governors resolution GOV/2742, June 10, 1994, para. 2.

dispatched the same report to the UN General Assembly that it sent to the Council on April 12. It appears, however, that the Secretariat waited for the annual General Conference in September 1993 to issue its first report to the IAEA membership as a whole. Only the Secretariat's reports to the Board were kept confidential. Reports to the General Conference, Security Council and UN General Assembly were assumed to have such wide distribution that they would soon become public anyway and were treated from the outset as public documents.

In response to the Secretariat's report the General Conference passed its first resolution on the issue on October 1, 1993, calling on North Korea to "cooperate immediately with the Agency in the full implementation of the safeguards agreement."¹²⁰ The Conference had no compunction about using the term "non-compliance," noting the IAEA's "grave concern that North Korea has failed to discharge its safeguards obligations and has recently widened the area of non-compliance by not accepting scheduled Agency ad hoc and routine inspections as required by the safeguards agreement." In retaliation North Korea pledged to reject IAEA offers to resume consultations.

In November 1993 the UN General Assembly also passed a resolution on North Korea, unusual in that the Assembly is not supposed to involve itself in matters that the Security Council is "seized of" (although it could be argued that the Council had not really done much). The Assembly passed a nine-point resolution urging North Korea to "cooperate immediately with the IAEA in the full implementation of the safeguards agreement."¹²¹

1994 Agreed Framework and IAEA Reporting

The North Korea case shares with the Iraq case the intrusion of an outside mechanism that complicated the Agency's non-compliance reporting function. In this instance the Agreed Framework, negotiated in 1994 between North Korea and the United States was intended to return North Korea to the NPT and compliance with safeguards and impose a verifiable freeze on the North's nuclear activities. In return North Korea would receive fuel oil, light water reactors and a normalization of relations with the United States. ElBaradei was critical of the agreement on the grounds that the Agency would not be permitted to resume its verification activities in the initial stages of the Framework's implementation, even though North Korea had "suspended" its withdrawal from the NPT and the Agency regarded its

¹²⁰ IAEA General Conference resolution, Implementation of the Agreement between the Agency 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, October 1, 1993, http://www.iaea.org/About/Policy/GC/GC37/GC37Resolutions/English/gc37res-624_en.pdf (accessed September 23, 2015). Adopted by 72 votes in favor, two against (Libya and North Korea) and 11 abstentions.

¹²¹ Adopted 140 in favor, one against (North Korea) and with nine abstentions.

safeguards agreement as remaining in force. As he says, “this put North Korea in an automatic state of noncompliance,” which was both “politically and legally awkward.”¹²²

The Agency’s role was to monitor the “freeze,” essentially the shut-down of five main Yongbyon nuclear facilities.¹²³ In the Agency’s view, the activities under the Agreed Framework were a “subset of activities to be performed under the Safeguards Agreement.”¹²⁴ The Agency’s reports reflected this understanding. The Agreed Framework provided that key parts for the light water reactors under construction by the Korean Peninsula Energy Development Corporation (KEDO) would not be delivered unless the Agency could certify that North Korea was in full compliance with its safeguards agreement. The Agency continued to hold “technical talks” with the North Koreans until November 2001, but it could never resolve the original outstanding non-compliance questions, nor could it inspect the two reactors under construction.

In October 2002, after the U.S. announcement that the DPRK had acknowledged that it had a uranium enrichment program, it was the United States, Japan and South Korea, not the IAEA, which concluded that this was a violation not only of the Framework Agreement but of the NPT and the DPRK-IAEA safeguards agreement. The IAEA was not involved in reporting this development. On November 29, the Board adopted a resolution without a vote that insisted that the DPRK cooperate with the Agency in resolving the issue and recognized that an undeclared enrichment program “or any other covert nuclear activities would constitute a violation of the DPRK’s international commitments, including the DPRK’s safeguards agreement with the Agency.”¹²⁵ In December 2002 North Korea asked the Agency’s inspectors to leave.

North Korea finally announced its withdrawal from the NPT effective as of January 11, 2003. As the Agency is not party to the NPT it was not its role to determine the status of North Korea’s withdrawal, but it continued to act as if the country’s CSA remained in force.¹²⁶ On February 12, 2003, the Board again adopted a resolution declaring North Korea to be “further in non-compliance” with its safeguards agreement, which it said “remains binding and

¹²² ElBaradei, p. 45.

¹²³ A 5MW(e) reactor, radiochemical laboratory (reprocessing), fuel fabrication plant, and partially built 50 and 2000MW(e) nuclear power plants.

¹²⁴ IAEA, “North Korea Safeguards Factsheet,” <https://www.iaea.org/newscenter/focus/dprk/fact-sheet-on-dprk-nuclear-safeguards> (accessed May 19, 2015), p. 2.

¹²⁵ Quoted in IAEA, “North Korea Safeguards Factsheet,” p. 3.

¹²⁶ For the complexities of this issue see John Carlson, “Withdrawal from the NPT: consequences for IAEA safeguards,” International Commission on Nuclear Non-Proliferation and Disarmament (ICNND) Research Paper No. 8, June 5, 2009, www.icnnd.org.

in force.” It again reported the matter to the UN Security Council.¹²⁷ The Council called on North Korea to “remedy urgently” its non-compliance and cooperate fully with the Agency, but otherwise was not able to agree on a course of action to resolve the issue.¹²⁸

On October 9, 2006 the DPRK announced that it had conducted an underground nuclear test, the most blatant violation of a safeguards agreement imaginable since it clearly involved the diversion of nuclear material to a nuclear explosive device. The Board discussed the matter at its November 2006 meeting, but not on the basis of a non-compliance report from the Director General, since the IAEA is unable to detect nuclear tests (this is the role of the Provisional Technical Secretariat of the Comprehensive Test Ban Treaty Organization (CTBTO), located in the same building as the IAEA). The CTBTO did detect and report the test to the parties to the Comprehensive Test Ban Treaty. Following the test the Security Council finally decided to act, imposing sanctions on North Korea and demanding that it return to the NPT and accept IAEA safeguards. The Council, unlike in the Iraq case, did not task the IAEA with doing anything further and has never done so.¹²⁹

Despite the Board’s continuing interest in the North Korea case, there were no separate, confidential reports by the Director General to the Board on the issue from 2002 to 2006, but only annual reports to the General Conference. This indicates that keeping a non-compliance issue alive at the IAEA is not dependent on reports to the Board.

Six-Party Talks and IAEA Reporting

In February 2007 agreement was announced on a new freeze on North Korean nuclear activities as a result of the Six Party Talks between the DPRK, China, Japan, Russia, South Korea, and the United States that began in August 2003. The DPRK undertook to “invite back IAEA personnel to conduct all necessary monitoring and verifications as agreed between the IAEA and the DPRK.”¹³⁰ As in the case of the Framework Agreement, the IAEA had not participated in the talks, nor was it involved in decision-making about its involvement in verification.

127 “IAEA Board of Governors Adopts Resolution on Safeguards in North Korea,” IAEA, February 12, 2005, <https://www.iaea.org/newscenter/mediaadvisories/iaea-board-governors-adopts-resolution-safeguards-north-korea-0> (accessed September 22, 2015).

128 On March 3, 2005 a unique document on the DPRK, a “Board Chairman’s Conclusion,” summed up the situation but it remains confidential.

129 UNSC Resolution 1718 (2006), October 14, 2006.

130 IAEA, “Fact Sheet on DPRK Nuclear Safeguards,” p. 5. For more detail see Charles L. Pritchard, *Failed Diplomacy: The Tragic Story of How North Korea Got the Bomb*. (Washington, D.C.: Brookings Institution Press, 2007), p. 159.

In March a high-level IAEA delegation led by Director General ElBaradei visited the country for talks on normalizing relations between the DPRK and the Agency. In July he submitted a special report to the Board, the first in five years, entitled “Monitoring and Verification in the Democratic People’s Republic of Korea.”¹³¹ The report outlined agreed “ad hoc” arrangements as the Agency called them, for monitoring and verification of the shutdown of the Yongbyon nuclear facility and the reactor still under construction in Taechon. This the IAEA began to do successfully in July 2007, applying seals and other surveillance and monitoring measures.

In August 2007 a new pattern of annual reporting on North Korea was established when the Board and General Conference were sent the same report. These were now titled “Application of Safeguards in the DPRK,”¹³² rather than “Implementation of the NPT Safeguards Agreement between the Agency and the DPRK,” a recognition of the request by the six parties to implement safeguards in the DPRK. The August 2007 report was brief, noting the monitoring arrangements put in place for North Korea’s “Initial Actions” and concluding that “The Agency has verified the shutdown of the Yongbyon nuclear facility and is continuing to implement the ad hoc monitoring and verification arrangement with the cooperation of the DPRK.”¹³³ One can deduce from the brevity and tone of the report that the Secretariat was not pleased about its limited verification role in North Korea.

In September 2008 the Director General informed the Board orally that North Korea had asked the Agency to remove the seals and surveillance equipment from the reprocessing facility at Yongbyon.¹³⁴ There were further restrictions on Agency access later that month, followed by reinstatement of certain access in October. In April 2009, following the DPRK’s decision to cease all cooperation with the IAEA, Agency inspectors and equipment were again withdrawn. The Director General reported on this to the Board on April 14, in the form of an “information document.”¹³⁵ These are used to provide factual information or documentation originating from within or outside the Agency to the Board. They were used extensively in the North Korea case to keep the Board abreast of rapidly unfolding developments.¹³⁶

131 IAEA, *Monitoring and Verification in the Democratic People’s Republic of Korea: Report of the Director General*, GOV/2007/36, (Vienna: IAEA, July 3, 2007).

132 IAEA, *Application of safeguards in the Democratic People’s Republic of Korea: Report of the Director General*, GOV/2007/45-GC(51)/19, (Vienna: IAEA, August 17, 2007).

133 GOV/2007/45-GC(51)/19, para. 10.

134 IAEA, *Application of safeguards in the Democratic People’s Republic of Korea, Report by the Director General* GOV/2009/45-GC(53)/13, p. 2, fn. 4 (Vienna: IAEA, July 30, 2009).

135 IAEA, GOV/INF/2009/5 (Vienna: IAEA, April 14, 2009).

136 Other examples were IAEA, GOV/INF/2008/13, October 9, 2008 and GOV/INF/2008/14, (Vienna: IAEA, October 13, 2008).

Reporting Post-Withdrawal

Since 2009, despite the lack of direct access to the DPRK by its inspectors, the Secretariat, at the request of member states, has continued to report annually on the DPRK's non-compliance with its safeguards agreements to both the General Conference and the Board. The reports are identical and released simultaneously, as well as to the public. As the Agency has lost direct access to North Korea the reports have tended to shrink. Most of the detail has come from analyzing commercial satellite imagery and open sources. An exception was in 2011, when the Director General provided an 11-page report that supplied an historical overview of safeguards implementation in North Korea, summarized the Agency's monitoring activities under the Agreed Framework, and detailed Agency activities in the DPRK pursuant to the Six-Party Talks.¹³⁷ The report conceded that "as the Agency is no longer able to carry out verification activities in the DPRK, its knowledge of the DPRK's nuclear programme is limited."¹³⁸

With regard to the North Koreans' apparent admission that they now had a uranium enrichment plant, the report recorded that the Agency had interviewed Dr. Siegfried Hecker, a member of a private group which had visited the facility, and conducted a technical review of his report. As the Agency had no design information or access to the plant itself, it could not, the Director General said, confirm the "configuration and operational status of the enrichment facility observed by the group."¹³⁹ Still, this appears to be the first time that the Agency had reported on a non-official observation mission as part of its non-compliance reporting.

The report also raised for the first time in respect of North Korea the issues of weaponization and nuclear testing, noting briefly that satellite imagery enabled the Agency to monitor locations that may be relevant, but that without on-site access it could not make any further technical assessment.¹⁴⁰ The Agency had concerned itself with weaponization in the Iraq case and was by this time already concerning itself with the issue in respect of Iran.

¹³⁷ IAEA, *Application of Safeguards in the Democratic People's Republic of Korea*, GOV/2011/53-GC(55)24, (Vienna: IAEA, September 2, 2011).

¹³⁸ GOV/2011/53-GC(55)24, para. 27.

¹³⁹ GOV/2011/53-GC(55)24, para. 34. The report included an annex listing North Korea's nuclear facilities and locations of nuclear material outside facilities (LOFs), but not the enrichment plant.

¹⁴⁰ GOV/2011/53-GC(55)24, section E.7.

The 2011 report also covered, for the first time, the issue of North Korea's "nuclear assistance to other states,"¹⁴¹ another new dimension of IAEA non-compliance reporting that had first arisen in the Libya case's revelations about the A.Q. Khan network (see Libya case study). The report specifically mentioned the allegation that North Korea had assisted Syria in building an undeclared nuclear reactor that Israel had bombed in September 2007 (see Syria case study). The report also said there was evidence that Libya had imported a cylinder containing North Korean natural uranium UF₆, indicating that the DPRK had undeclared uranium conversion facilities prior to 2001. This shows the growing complexity of IAEA non-compliance reporting: two or more cases might be linked and evidence about one party might be used to bolster a non-compliance case against others.

The most recent annual report on North Korea, of September 3, 2014, is brief, updating IAEA members on developments since the previous report and recording that since April 2009 the Agency has not been able to implement any safeguards measures in the DPRK. The Agency indicated that it stands ready to resume verification activities there by collecting and evaluating safeguards relevant information, preparing safeguards equipment and developing procedures for its use, and in staff training. Reports such as these can no longer be described as simply non-compliance reports, but rather reports on Agency readiness to resume a verification role when circumstances allow.

As might be expected from the description of the North Korea case, the Secretariat's non-compliance reports on that country are far from being a straightforward linear series. Rather they have responded to the twists and turns in the North Korea saga, reacting to events that have often been beyond the ability of the Agency to influence, much less control.

Iran (2003–Present)

With the North Korea case still unresolved, the IAEA acquired a new non-compliance file in 2002, after the United States reportedly briefed the Secretariat on Iran's clandestine nuclear activities. These allegations became public at a press conference in Washington, D.C. on August 14, 2002, when an Iranian opposition group accused Iran of constructing undeclared facilities at Natanz and Arak. Although the Agency had been receiving briefings from several member states since the early 1990s indicating possible undeclared

¹⁴¹ GOV/2011/53-GC(55)24, section E.8.

nuclear activities, this time the specificity and public nature of the allegations allowed the Agency to act, plunging it into a non-compliance saga that has consumed enormous amounts of the Secretariat's energy, time and resources and generated political controversy about the IAEA's non-compliance role.

The Iran non-compliance case has been running for so long that it has resulted in more than 50 reports by the Director General to the Board and the Security Council, as well as innumerable oral reports, technical briefings and bilateral and multilateral meetings. From the outset the Board agreed, at the suggestion of the United States to de-restrict the reports, making this the first case where scholars can analyze the whole progress of a non-compliance case through such documents. Although the reports are mostly cumulative, often simply repeating what has been reported previously with the addition of an update, they are sometimes novel, setting new precedents for future cases. In fact, if any case has set a pattern for future reports it is the Iran case, given the multiple alleged violations involved, the waxing and waning of Iranian cooperation over the years, the engagement of outside parties in the case, which had to be taken into account in reporting, and the sheer technical detail necessary for the Agency to make its case. The reports paint a changing picture of the Secretariat's relationship with and attitudes towards Iran, at times demonstrating a willingness to give it the benefit of the doubt (in respect of relatively minor issues that Iran apparently clarified to the reasonable satisfaction of the Agency) to a much harder line (for example in regard to the activities at the Parchin military base).

The Iran case has, as in a number of others, been complicated by diplomatic efforts by other parties, not necessarily in consultation with the Secretariat, designed to negotiate a resolution of the non-compliance issue. These have often resulted in increased IAEA responsibilities for verification and non-compliance reporting. Initially the European Union (EU) 3, then the EU3 plus the rest of the P5 members of the Security Council, initiated such efforts. Russia, Brazil and Turkey also engaged Iran on the issue of removing part of Iran's nuclear material, which would presumably have involved the IAEA in verifying such removal and reporting on compliance with that arrangement. The Security Council itself, by imposing a ban on Iranian enrichment and reprocessing activities, has obliged the IAEA to report on Iran's compliance with those demands (even if Iran has never indicated it would accept them). The Iran case has also become entangled with other non-compliance cases which have emerged, most notably the Libya and Syria cases, and the A.Q. Khan connection. The most recent external negotiating efforts, beginning in 2013, have resulted in a comprehensive settlement, agreed in July 2015, that will involve the IAEA critically in determining Iran's compliance with an array of additional obligations to those undertaken in its CSA.

It is beyond this report to cover comprehensively the long-running Iran saga, especially as it has been the most intense, fraught, and complex non-compliance case ever tackled by the Agency. Instead the focus will be on the critical period from 2002 to 2006, when the Agency was faced with the dilemma of how to characterize Iran's non-compliance.¹⁴² This period witnessed bitter debates about whether Iran should be explicitly declared to be in non-compliance by the Director General, whether the Board itself should use the word non-compliance, regardless of whether or not the Director General did, and whether this would automatically trigger a report to the Security Council. A multitude of factors came into play: the implications of the Statute and Iran's CSA, the involvement of the European Union in separate talks with Iran, and the respective pressures on the Agency from President George W. Bush's administration and its Western allies on the one side, and Iran and its non-aligned movement (NAM) supporters on the other.

Hovering in the background of the case was international condemnation of the invasion of Iraq undertaken by the United States and some of its allies in 2003, and fears that there would be a replay in the case of Iran. As a result of these and other factors, including Iran's partial but inconsistent cooperation and a drip-feed of further non-compliance allegations, it took more than two and a half years for the IAEA Board to reach a finding of non-compliance after the first public allegations that Iran's activities were in violation of its safeguards agreement. The Secretariat never did use the word "non-compliance," although clearly it was reporting exactly that.

The Reporting Begins

The first written report by Director General ElBaradei to the Board on Iran came on June 6, 2003.¹⁴³ After public revelations of possible Iranian non-compliance in 2002 he first sought to use quiet diplomacy and then IAEA inspections to resolve the issue. This indicates again that a written report to the Board is not necessarily the first option that a Director General will choose to take, or the best option. ElBaradei met with Gholam Reza Aghazadeh, vice-president of Iran and president of the Atomic Energy Organization of Iran (AEOI), during the IAEA General Conference in September 2002 to ask him about the allegations. Aghazadeh apparently replied that Iran would "clarify everything" and

¹⁴² For an excellent detailed account of this period, on which I greatly relied, see Nima Gerami and Pierre Goldschmidt, "The International Atomic Energy Agency's Decision to find Iran in Non-Compliance, 2002–2006," Case Study Series, no. 6, Center for the Study of Weapons of Mass Destruction, (Washington, D.C.: National Defense University Press, December 2012).

¹⁴³ IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2003/40, (Vienna: IAEA, June 6, 2003).

agreed to a visit by an IAEA inspection team in October 2002, as well as a meeting with the President of Iran, Mohammed Khatami.¹⁴⁴

This did not occur until late February 2003 after “a long list of excuses.”¹⁴⁵ ElBaradei records that the timing was not ideal: “North Korea had just withdrawn from the NPT. The UN Security Council was sharply divided over the use of force in Iraq, and a military invasion seemed imminent. Our inspection staff was, to say the least, stretched.”¹⁴⁶ ElBaradei himself undertook the mission, accompanied by Deputy Director for Safeguards Pierre Goldschmidt and inspector Olli Heinonen.

During the visit the Iranians admitted that the facility at Natanz was a uranium enrichment plant and that the Arak facility was a heavy water production plant. Inspectors verified that Iran had imported previously undeclared uranium hexafluoride (UF₆) as feedstock for enrichment and enquired about possible enrichment activities at a workshop in Tehran belonging to the Kalaye Electric Company. The Iranians argued that they had no obligation to report Natanz to the Agency until 180 days before nuclear material was introduced into it. Iran had declined until later in 2003 to accept an amendment to Code 3.1 of its CSA, which all other states with Subsidiary Arrangements had accepted, requiring it to provide notice of new facilities as soon as they are planned.

The Director General’s first written report in June 2003 spoke of “safeguards issues that need to be clarified and actions that need to be taken with regard to ... implementation” of Iran’s safeguards agreement with the Agency.¹⁴⁷ The report characterized these as “a number of failures by Iran to report the material, facilities and activities in question in a timely manner.” It described this as “a matter of concern.” The Director General, the report said, had repeatedly urged Iran to conclude an AP, given the scale of its nuclear activities. The final section of the report was entitled “Findings and initial assessment” and had an annex listing Iran’s nuclear facilities, including those previously undeclared but now under safeguards.

The United States had by this time been lobbying other Board members to immediately find Iran in non-compliance, as the Board had swiftly done in the North Korea case. Behind the scenes the Americans also pressed the Director General to pave the way for

¹⁴⁴ ElBaradei, pp. 112–113.

¹⁴⁵ ElBaradei, p. 113.

¹⁴⁶ ElBaradei, p. 113.

¹⁴⁷ IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2003/40, (Vienna: IAEA, June 6, 2003).

Board action by issuing a clear finding of non-compliance in his first report, notably by using the term “non-compliance.” ElBaradei, no doubt aware of the ramifications, declined to do so, arguing that the IAEA’s verification was “work in progress” that needed more time for completion.¹⁴⁸ The Board, in response, as recorded in the Chair’s summary, said the Board shared the Director General’s concern about Iran’s “past failures” and urged Iran to promptly rectify “all safeguards problems.”¹⁴⁹ Given Iran’s subsequent “increased degree of cooperation,” the Director General’s second report to the Board, of August 26, 2003, also did not seek to reach a conclusion about Iran’s non-compliance. But the document was already 10 pages long, indicating the increasing complexity of the details and the size and sophistication of the Iranian nuclear enterprise that was being revealed.¹⁵⁰

On October 16, 2003, in light of further revelations, ElBaradei returned to Tehran prepared to “confront the Iranians,” an encounter he described as “pivotal.”¹⁵¹ Hassan Rouhani, secretary of the National Security Council, “without directly apologizing for past concealment and deception,” said Iran was ready to “turn over a new leaf” with the Agency and provide full disclosure of past and present nuclear activities. Iran was also ready to conclude an AP and act as if it were in force. In the meantime Rouhani had been negotiating with the EU3, signing the Tehran Declaration on October 31, 2003. In this document, in addition to confirming its future cooperation with the Agency and its AP undertaking, Iran pledged to suspend voluntarily its enrichment and reprocessing activities “as defined by the IAEA” as a “confidence-building measure” while talks with the EU3 continued. Here again was a case of outside parties imposing verification tasks and judgment calls on the Director General without consulting him.¹⁵² This deal would complicate the Agency’s verification and reporting task, not least because ElBaradei, unknown to the EU3, had communicated to the Iranians a more comprehensive definition of suspension, prohibiting the introduction of UF₆ into centrifuges (this appears to contradict accusations that ElBaradei was “soft” on the Iranians).¹⁵³

The Director General’s third report on Iran, of November 10, 2003, reported these developments and spoke of “a number of additional failures.”¹⁵⁴ It is one of the longest

148 Intervention on Iran by Dr. Mohamed ElBaradei, Director General of the IAEA, during the IAEA Board of Governors Meeting, June 18, 2003.

149 Reported in IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2003/63, August 26, 2003.

150 Reported in GOV/2003/63.

151 ElBaradei, p. 114.

152 Statement by the Iranian Government and Visiting Foreign Ministers, October 21, 2001, www.iaea.org/newscenter/focus/iaea/iran/statements_iran21102003.shtml.

153 Gerami and Goldschmidt, p. 6.

154 IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2003/75, (Vienna: IAEA, November 10, 2003), p. 10.

non-compliance reports ever compiled by the Secretariat. In addition to the 10-page report itself, it had three appendices providing an unprecedented 14-page “Detailed technical chronology,” a “List of locations relevant to the implementation of Agency safeguards,” a map of Iran and a list of abbreviations and terms. ElBaradei recalls “there was a great deal to convey.”¹⁵⁵ This was due not just to Iranian disclosures but to the power of the AP, which Iran had started to implement, and which had begun to reveal new information. The Director General’s report concluded that recent disclosures by Iran had showed that “in the past, Iran had concealed many aspects of its nuclear activities, with resultant breaches of its obligation to comply with the provisions of its Safeguards Agreement.” This gave rise to “serious concerns.” The Director General, notably, used the word “breach,” not “non-compliance.” On the other hand the report gave credit to Iran for promising full cooperation and agreeing to abide by an AP.

Unfortunately, the report also included the sentence: “To date, there is no evidence that the previously undeclared nuclear material and activities referred to above were related to a nuclear weapons programme.” While technically true, in the sense that further verification was required to demonstrate a link, the statement appeared to be tone deaf in respect of the political mood in the Board (to be fair, it appears that ElBaradei used the term “evidence” as meaning “proof”).¹⁵⁶ It was also unnecessary. The following sentence was also included in the report: “... given Iran’s past pattern of concealment, it will take some time before the Agency is able to conclude that Iran’s nuclear programme is exclusively for peaceful purposes.”¹⁵⁷

Despite controversy over ElBaradei’s choice of words the Board itself in its resolution of November 26¹⁵⁸ used the terms “past failures” and “breaches,” replicating the Secretariat’s language (confirming ElBaradei’s concern that if the Secretariat used certain terminology the Board would follow suit). It also decided that it would meet immediately if further serious Iranian failures came to light. The Board asked the Director General to submit a “comprehensive report” in February 2004 for consideration at its March meeting.

The U.S. Secretary of State for Arms Control, John Bolton, was furious that the IAEA Secretariat and the Board (he did not distinguish between the two, to the frustration of the U.S. ambassador in Vienna) had not taken a more hard line against Iran. He says in his

¹⁵⁵ ElBaradei, p. 122.

¹⁵⁶ According to John Carlson, email message to author, June 27, 2015. One would have expected that as a lawyer and Director General he would have taken more care with the language he used in such a sensitive case.

¹⁵⁷ GOV/2003/75, p. 10.

¹⁵⁸ IAEA Board of Governors resolution GOV/2003/81, November 26, 2003.

memoirs that he hoped to have a “referral” of Iran to the Security Council at the June 2003 Board meeting and, failing that, at the September meeting.¹⁵⁹

I wanted to pursue Iran in the IAEA Board of Governors (BOG, as accurate an acronym as there ever was), using Iran’s continued intransigence to move the entire matter to the Security Council, where we could try to impose sanctions. I wasn’t confident about the Security Council, but at least we could check the IAEA/UN box, and could then go on to do whatever might actually be necessary to stop Iran from achieving a nuclear weapons capability.

He blamed both U.S. officials in Vienna and the EU3 for easing the pressure on Iran with their Tehran Agreement.¹⁶⁰ The U.S. Governor on the Board, Ken Brill, was instructed to read a statement saying that “the institution charged by the international community with scrutinizing nuclear non-proliferation risks is dismissing important facts that have been disclosed by its own investigation.”¹⁶¹ It would take time, the statement said, to overcome the damage to the Secretariat’s credibility. ElBaradei struck back, defending the Agency’s progress in developing a picture of Iran’s program and claiming that the Agency’s reputation had increased since Iraq “because of our objectivity.”¹⁶²

The controversy illustrates the fine line that the IAEA Secretariat has to walk in providing strictly technical, factual reports using standard safeguards formulations (which may sometimes be jarring in their blandness and apparent distance from reality) and the need to accommodate the interests of all of the Agency’s member states. Here ElBaradei was giving Iran the benefit of the doubt in order to encourage its further cooperation and speedy return to compliance.

The Word Non-Compliance Abjured

The Director General’s use of the word “breach” rather than “non-compliance” was deliberate. While insisting, implausibly, that his expression was tougher, he clearly wished to avoid the term “non-compliance” so as not to give ammunition to Board members, led by the United States, that wanted the Board to use such a determination to automatically trigger a report on Iran to the Council—as provided for by the Statute. In fact ElBaradei had sought legal advice on whether he was required in the circumstances to make an

¹⁵⁹ John Bolton, *Surrender is Not an Option* (New York: Simon & Schuster, 2007), p. 136.

¹⁶⁰ Bolton, pp. 138–139.

¹⁶¹ Quoted in ElBaradei, p. 122.

¹⁶² ElBaradei, p. 123.

explicit finding of non-compliance. Considering how many times the Agency had to deal with non-compliance cases prior to 2003, it is surprising that the issue of when the term non-compliance must be used first arose in the Iran case.

The reason, according to Laura Rockwood, is that in the previous three cases (Iraq, North Korea, and Romania) there had been general acceptance in the Board that non-compliance had occurred and that the Security Council should be informed.¹⁶³ In the Iran case, on the other hand, there was strong disagreement among member states, including in the Board, as to how the non-compliance charge should be handled. Olli Heinonen says certain member states pressed the Secretariat to leave the word “non-compliance” out of the Iran report.¹⁶⁴ The EU3 had already told Iran that in their view full implementation of Iran’s decisions, confirmed by the IAEA’s Director General, should enable the immediate situation to be resolved by the IAEA Board, rather than reporting the matter to the Security Council.

The legal office concluded, after examining the Statute, the texts of successive types of safeguards agreements, and the precedents set by the previous non-compliance cases, that the Director General indeed had discretion as to whether and when to report non-compliance to the Board, and whether to use the term non-compliance. The legal advice was that there was no difference between the terms “non-compliance,” “breach,” and “failure to comply.”

U.S. pressure for a quick “referral” seems paradoxical considering how little faith the Bush administration had in the judgments of multilateral institutions, but was clearly part of its campaign to pressure Iran. Oddly, Bolton does not record in his memoirs that the United States was demanding that the Agency specifically use the term “non-compliance” or that the Board needed to use the word, only that that the Board should reach “definitive conclusions.” He seemed to think, incorrectly, that this was “a code phrase for a referral to the Security Council.”¹⁶⁵ No one in Vienna seemed to think this was sufficient for referral, but rather that it would help build the case against Iran for later referral.¹⁶⁶ In the end the phrase “definitive conclusions” was included in the September 2003 Board resolution, but Iran was still not “referred” to the Security Council.

For his part ElBaradei says he “had long been careful to avoid using the word non-compliance, opting instead for synonyms such as breach or violation, so as not to prejudice

¹⁶³ Interview with Laura Rockwood, Harvard, May 13, 2015. See also Myron Kratzer, “History of the Negotiation of INFCIRC/153,” <http://cgs.pnnl.gov/fois/doclib/INFCIRC153Ch1-3.pdf> (accessed September 30, 2015).

¹⁶⁴ Interview with Olli Heinonen, Harvard, May 22, 2014.

¹⁶⁵ Bolton, p. 142.

¹⁶⁶ Communication with former senior U.S. official, Vienna, June 15, 2015.

the Board.”¹⁶⁷ Presumably he means that he intended to not prejudge the outcome of the Board’s deliberations (paradoxically, in English “violation,” with its intimations of the use of force, sounds stronger than “non-compliance,” although “breach” does not). On a number of occasions he also used “failure to comply.” Those sympathetic to ElBaradei claim his real motivation was to give more time for diplomacy, including his own, to avoid the possibility of precipitate Security Council action (or military action by the United States or Israel). ElBaradei was deeply affected by his inability, along with that of UNMOVIC Executive Chairman Hans Blix, to head off the invasion of Iraq through their respective verification efforts and reports. He claims that the Iranians themselves believed that their cooperation with the Agency (including acting as if they had an AP in force) would prevent their “referral” to the Security Council.¹⁶⁸ Finally, ElBaradei feared that if Iran were pressed too hard it would do what North Korea had just done and leave the NPT and the IAEA.¹⁶⁹

Some have argued, including both the Australian delegation at the time the Iran case came before the Board and the International Commission on Nuclear Non-proliferation and Disarmament (ICNND) in 2009, that by declining to use the word “non-compliance” in the Iran case the Secretariat had let “political” judgments intrude on what should have been a technical recommendation.¹⁷⁰ But the opposite argument could be made: that by retreating to purely technical descriptions of a case and not being drawn into an arcane debate on what constitutes non-compliance, the Secretariat removed itself from a judgment call that would have been seen by others as political.

Towards “Referral” to the Council

The Director General’s comprehensive report of February 24, 2004, requested by the Board, noted that despite Iran’s cooperation in some areas, its omission of details about its centrifuge research and development activities was “a matter of serious concern” and that there were continuing “outstanding matters” in regard to the Kalaye Electric Company, Natanz, and other issues.¹⁷¹ The report also for the first time mentioned the Libyan and A.Q. Khan connection. Iran, portraying the report in the most favorable light, pressed the Director General to remove its case from the Board’s agenda in March. The European Union supported

¹⁶⁷ ElBaradei, p. 145.

¹⁶⁸ ElBaradei, p. 146.

¹⁶⁹ ElBaradei, p. 136.

¹⁷⁰ International Commission on Nuclear Non-Proliferation and Disarmament (ICNND), *Eliminating Nuclear Threats: A Practical Agenda for Global Policymakers*, Report of the International Commission on Nuclear Non-Proliferation and Disarmament (ICNND), Canberra/Tokyo, November 2009, p. 87, para. 9.14 and “NPT Safeguards – Non-Compliance Issues,” Informal discussion paper distributed by Australia at IAEA Board of Governors meeting, November 26, 2003, p. 6.

¹⁷¹ IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2004/11, (Vienna: IAEA, February 24, 2014).

this in order to encourage further Iranian cooperation, while the United States was adamantly opposed. ElBaradei told all of them that the Iran case should remain on the agenda until all questions had been resolved.

Gerami and Goldschmidt report that negotiation of the March Board resolution produced a serious split among its Western members.¹⁷² While Australia, Canada, Japan, and the United States called for strong language condemning Iran, the EU3, which normally produced the first draft of the resolution, opted for milder language so as “not to upset the applecart.” Demonstrating how byzantine non-compliance cases can become, the United States and Iran reportedly sent private messages to ElBaradei requesting his assistance in drafting language. ElBaradei reports that “In the end everyone signed off on a consensus resolution that pleased both the Americans and Iranians” and the meeting “went off without a hitch.”¹⁷³ A formal finding of non-compliance was deferred until September 2005.

However, as an indication of how heated the Iran issue was becoming, the Secretariat felt obliged to issue a “Note” on March 30, 2004 rebutting Iran’s March 5 “Commentary and Explanatory Notes” on the Director General’s March report.¹⁷⁴ As Iraq and North Korea had done, Iran was intent on using every diplomatic technique available to defend its case.

In April 2005 ElBaradei and senior Agency officials again visited Tehran and met with Mohammed Khatami, the President of Iran, Vice President Rouhani, and Foreign Minister Kharrazi, who declared that cooperation with the Agency would be accelerated. ElBaradei reports that he told them he was “sick and tired of their procrastination and delays” and that the Board’s patience was “wearing thin.”¹⁷⁵ Back in Vienna, straying somewhat from his mandate, he urged the Americans to begin a dialogue with the Iranians or at a minimum to make a positive gesture, apparently in order to permit the Iranian moderates to keep the conservatives at bay.

Increasing Complexity of Reporting, Including on Weaponization

The Iran reports were now becoming so large and technical, in part due to the effectiveness of the application of the AP, that the Secretariat took to leaving out the background to the issue, making them less self-contained. For small, busy delegations without strong technical support

¹⁷² Gerami and Goldschmidt, p. 8.

¹⁷³ ElBaradei, p. 129.

¹⁷⁴ IAEA, Note by the Secretariat: Secretariat response to Comments and Explanatory notes provided by Iran in INFCIRC/628 on the Director General’s report on Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran (GOV/2004/11), 2004/Note 17, March 30, 2004.

¹⁷⁵ ElBaradei, p. 133.

this would become problematic. The reports did, however, begin to include updates on the chronology of the rapidly developing saga. The June 2004 report was nine pages long, with a Verification Activities annex of 11 pages.¹⁷⁶ It recorded “good progress” on the actions agreed during the Director General’s visit to Tehran but that a number were “still outstanding,” especially relating to Iran’s previously unreported enrichment program. In response the Board adopted a resolution on June 18 deploring Iran’s lack of “full, timely, and proactive cooperation with the Agency,” but again did not reach a decision on its “non-compliance.”¹⁷⁷ Iran responded by resuming manufacture and testing of centrifuges, which it had previously agreed to suspend as a voluntary measure. The 2003 Tehran Joint Declaration deal with the Europeans, meanwhile, collapsed. Inexplicably, the NAM called for the prompt closure of the Iran case and for the item to be removed from the Board’s agenda.¹⁷⁸

The reports to the Board in 2004 grew even more complex and longer as the Agency was now reporting on Iran’s compliance with its AP, the voluntary “suspension” of its enrichment and reprocessing activities, and all of the unaddressed concerns.¹⁷⁹ New questions had also arisen about weaponization efforts, including “alleged studies” consisting of the so-called Green Salt Project, high explosives testing, and work on a missile reentry vehicle, especially since the facility at Lavisan where some of the suspected activities had taken place had been razed. The Parchin military site issue also arose for the first time. The Agency’s involvement in verifying and reporting on weaponization efforts was controversial among some member states. Iran fostered such disquiet for the purpose of opposing intrusive verification efforts by the Agency. The IAEA had, the Iranians argued, been mandated to concern itself only with nuclear materials, not the additional steps that a state might take to acquire nuclear weapons.

But the Agency had already been involved in considering weaponization in the cases of Iraq and South Africa, so precedents had been set. While weaponization is not mentioned in the Statute or safeguards agreements, such documents do refer to the detection of diversion for military purposes, nuclear weapons, or other explosive devices or to “purposes unknown.” On a practical level, there was no other multilateral body but the IAEA available to undertake investigations of weaponization. The CTBTO, for its part, was mandated to consider only the nuclear testing part of weaponization efforts.

¹⁷⁶ IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2004/34, (Vienna: IAEA, June 1, 2004).

¹⁷⁷ IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2004/49, (Vienna: IAEA, June 18, 2004).

¹⁷⁸ Gerami and Goldschmidt, p. 9.

¹⁷⁹ See for example, IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2004/60, (Vienna: IAEA, September 1, 2004).

After receiving the September report the Board decided it would reconvene in November to “decide whether or not further steps are appropriate.” As Gerami and Goldschmidt note, this was “an implicit threat to find Iran in non-compliance if it refused to fully cooperate with the IAEA.”¹⁸⁰ The November 2004 report, the longest to date at 23 pages (with two small annexes), damned Iran with faint praise. It concluded again that there was “good progress in Iran’s correction of ... breaches” prior to October 2003, which would now be followed up as a routine safeguards implementation matter.¹⁸¹ But while exhibiting increased cooperation in some areas, the Iranians were continuing to be uncooperative in other areas, giving the impression that they were “gaming” the system to avoid being referred to the Security Council.

The November 2004 Paris Agreement and Its Collapse

Reinforcing this notion, the day before the report was circulated Iran signed yet another accord with the Europeans, the Paris Agreement, this time with the EU3 and the EU High Representative Javier Solana. It called for working groups to negotiate a long-term framework with Iran to settle the nuclear issue. Iran agreed to reinstate its voluntary suspension of all enrichment-related and reprocessing activities (this time carefully defined) on condition that the EU3 would not support “referral” to the Security Council. The Board had little choice but to welcome the Paris Agreement and again deferred a formal finding of non-compliance.¹⁸²

In the first half of 2005 there was no written IAEA report on Iran to the Board for the first time in two years. ElBaradei, with the support of the EU3, apparently decided that oral reports would suffice. Presumably this was designed to give the Paris Agreement time to be implemented without interference from Board meetings and resolutions. Instead DDG for Safeguards Pierre Goldschmidt briefed the Board on March 1¹⁸³ and June 16.¹⁸⁴ While Iran’s cooperation continued to be mixed, one positive development was that the Agency had at last been permitted a (highly restricted) visit to the Parchin military base and was allowed to take environmental samples (a follow-up visit was refused).

¹⁸⁰ Gerami and Goldschmidt, p. 10.

¹⁸¹ IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2004/83, (Vienna: IAEA, November 15, 2004), p. 23.

¹⁸² IAEA Board of Governors resolution, November 29, 2004, www.iaea.org/Publications/Documents/Board/2004/gov2009-90.pdf. The United States stated its objections to the resolution in a nine-page explanation of vote.

¹⁸³ Statement by Deputy Director General Goldschmidt (GOV/OR.1119) (Excerpts), March 1, 2005.

¹⁸⁴ Statement of the DDG-SG on June 16, 2005 at the Board of Governors’ Meeting, available at <http://fas.org/nuke/guide/iran/nuke/iaea0605.pdf> (accessed September 30, 2015).

With the election of Mahmoud Ahmadinejad to the Iranian Presidency in June 2005 the Paris Agreement also collapsed. The new government decided to remove all IAEA seals and resume uranium conversion. The IAEA Board adopted a consensus resolution on August 1 urging Iran to reverse its decision and asked the Director General to monitor the situation closely, report on any further developments as appropriate and provide a complete report by September 3.¹⁸⁵

The September 2005 report, again extensive at 13 pages, listed all of Iran's "failings" to report, declare, and cooperate, as well as instances where it had done so.¹⁸⁶ There was an annex giving a chronology of Iran's plutonium separation experiments. The Director General reported that the Agency was "not yet in a position to clarify some important outstanding issues after two and a half years of intensive inspections and investigation." Using stronger language than previously, he declared that Iran's "full transparency was indispensable and overdue." His report said this should extend beyond the CSA and AP and include access to individuals, documentation related to procurement, dual use equipment, certain military owned workshops, and research and development locations.

Here is an indication of how complex and multi-faceted the IAEA's verification task was becoming, certainly the most difficult the Agency had ever confronted. But the report did not describe Iran as currently being in non-compliance or even in breach of its obligations, even though it mentioned again that prior to October 2003, there had been "many breaches of its obligation to comply with" its safeguards agreement. Although there was some stronger language, it was not a particularly hard-hitting report. It did not reveal a "smoking gun" and did not appear to represent the trigger for a report to the Security Council. Peter Jenkins, then U.K. Governor, says that in the weeks leading up to the September 2005 vote on Iran, "ElBaradei made no secret of his self-assigned mission to save the member states, his employers, from taking a step to which he felt opposed."¹⁸⁷

Iran Found in Non-Compliance

Nonetheless, at the September Board meeting the EU3, finally having lost patience, proposed a draft resolution, supported by Australia, Canada, Japan, the United States, and other like-minded states, calling for Iran to be reported to the Security Council. China and Russia were opposed, arguing that the case could be resolved by the Agency without Council involvement.

¹⁸⁵ IAEA Board of Governors resolution GOV/2005/64, August 11, 2005.

¹⁸⁶ IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2005/67, (Vienna: IAEA, September 2, 2005).

¹⁸⁷ Peter Jenkins, "Staying credible: how precedents can help the IAEA get noncompliance calls right," *Arms Control Today*, September 3, 2010, http://www.armscontrol.org/act/2010_09/Jenkins (accessed September 30, 2015), p. 5.

The EU3 amended the draft accordingly and on September 24 the Board passed a resolution by 22-1 (Venezuela), with 12 abstentions, declaring for the first time, that Iran's "many failures and breaches of its obligations to comply with its safeguards agreement constitute non-compliance in the context of Article XII.C" of the IAEA Statute.¹⁸⁸

To ensure that the message about the Council's competence in the matter was noted, the resolution declared that Iran's nuclear activities also gave "rise to questions that are within the competence of the UN Security Council."¹⁸⁹

Despite the non-compliance finding the Board did not request the Director General to report Iran to the Security Council but instead urged Iran to take multiple measures: transparency beyond that required by Iran's CSA and AP; re-suspension of all enrichment and reprocessing activity; a reconsideration of the construction of a heavy water research reactor; full and prompt implementation of the AP and acting in the meantime as if it were in force.¹⁹⁰ The resolution also urged Iran to return to the negotiation process with the EU3. But the use of the term non-compliance, according to ElBaradei, made "eventual referral to the UN Security Council a certainty."¹⁹¹

Strangely, though, the next report by the Director General, in November 2005, did not mention that the Board had found Iran in non-compliance but only referred to the steps that the Board had asked Iran to take in improving its cooperation with the Agency.¹⁹² It was only five pages long and only covered developments after September 2005. It noted that Iran had been more forthcoming in providing access to additional documentation and permitting interviews with individuals who had been involved in discussions with the A.Q. Khan procurement network. Iran had also disclosed over 60 documents concerning an offer made in 1987 to supply it with centrifuge components and equipment, as well as a 15-page document describing procedures for casting and machining enriched uranium metal into hemispherical forms "related to the fabrication of nuclear weapon components."¹⁹³

188 IAEA Board of Governors resolution GOV/2005/77, September 24, 2005, www.iaea.org/Publications/Documents/Board/2005/gov2005-77.pdf.

189 Peter Jenkins says it is likely, although this cannot be proved, that the number of votes in favor would have been larger had Iran after 2003 not taken steps to remedy its non-compliance and "perhaps had not members of the Nonaligned Movement been susceptible to the influence of ... ElBaradei, who argued privately against a non-compliance finding" (Jenkins, p. 4). ElBaradei does not mention such private efforts in his memoirs, but it seems unlikely that in the absence of such efforts the NAM states would have voted differently. Iran's own diplomatic efforts and NAM solidarity would have been more influential than private diplomacy by ElBaradei.

190 GOV/2005/77, para. 4.

191 ElBaradei, p. 145.

192 IAEA, *Implementation of the NPT safeguards agreement in the Islamic Republic of Iran: Report by the Director General*, GOV/2005/87, (Vienna: IAEA, November 2005).

193 Update Brief by the Deputy Director General for Safeguards, January 31, 2006, available at www.fas.nuke/guide/iran/nuke/heinonen31012006.pdf.

At its November 2005 meeting the Board again decided against reporting Iran to the Security Council, this time due to a Russian offer to establish a joint venture with Iran, located on Russian territory, to enrich uranium. Iran rejected the idea and in January 2006 began removing IAEA seals from centrifuge components and equipment at Natanz and other facilities. The new DDG for Safeguards, Olli Heinonen, gave an oral and written “update brief” to the Board on these and other details on January 31, 2006.¹⁹⁴

Iran Finally Reported to the Security Council

On February 5, 2006 the Board held a special session to consider a draft resolution from the EU3. Passed 27-3 (Cuba, Syria, and Venezuela), with five abstentions, the resolution requested the Director General to report on the Iran case to the Security Council.¹⁹⁵ Oddly, the word “non-compliance” was not repeated. The relevant section of the IAEA Statute was not mentioned. The Director General was to report to the Council on the implementation of the Board’s decisions and to the Board on the implementation of the current resolution and previous ones at its next regular meeting, in March 2006. He was also instructed to send this report and any resolution adopted by the Board in March to the Security Council.

This rather tortuous formulation did not follow the simple path envisaged in the Statute and was clearly all that the politics of the Board would allow. The beauty of it was that it kept the initiative with the Board, with its greater expertise on technical matters, rather than handing the problem to the Security Council. Iran nonetheless took the resolution to be a “referral” to the Council and immediately announced it would no longer abide by its AP—although it would not leave the NPT or the IAEA.

The Iran Case Since Its “Referral” to the Council

One of the notable features of the Iran case both before and after its “referral” to the Council is that IAEA verification has continued under its CSA, making Iran one of the most intensively inspected IAEA member states. In recent years only Japan has received more inspections. This has meant, unlike in the case of North Korea, that there has been continuous detailed reporting by the Secretariat to the Board on the Iran case.

¹⁹⁴ Update Brief by the Deputy Director General for Safeguards, January 31, 2006.

¹⁹⁵ IAEA Board of Governors resolution GOV/2006/14, February 4, 2006. The Director General reported to the Council in GOV/2006/15, the same report he submitted to the Board dated February 27, 2006.

After the Security Council issued a Presidential Statement on March 29, 2006,¹⁹⁶ thereby becoming involved for the first time in the Iran case, the Director General was also obliged to report to the Council, but these reports tended to be the same as those to the Board. In July 2006 the Council, concerned that the IAEA was still unable to provide assurances about Iran's undeclared nuclear material and activities after more than three years, demanded that Iran suspend all enrichment-related and reprocessing activities, including research and development, and gave it one month to do so or face the possibility of economic and diplomatic sanctions.¹⁹⁷ This induced more Secretariat reporting.

Sanctions were first imposed on Iran in December 2006 by Security Council Resolution 1737.¹⁹⁸ Acting under Chapter VII of the UN Charter, which made compliance mandatory and enforceable,¹⁹⁹ the Council demanded that Iran suspend a range of its nuclear activities and cooperate fully with the IAEA in resolving the Agency's concerns. The word "non-compliance" was not used, while "compliance" was only used in reference to Security Council demands rather than Iran's safeguards agreement or Agency demands. It seems the word "non-compliance" had fallen out of favor everywhere.

In any event, from now on the Secretariat was required to report to the Council on Iran's compliance with the nuclear aspects of the sanctions resolution. This included reporting to the Council committee charged with monitoring overall implementation of the sanctions regime and on the implementation of restrictions on the Agency's technical cooperation with Iran.²⁰⁰ The Secretariat, perhaps in a fit of optimism, changed the title of its report of February 2007 from the previous "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran" to "Cooperation between the Islamic Republic of Iran and the Agency in the light of United Nations Security Council Resolution 1737 (2006)."²⁰¹ But it soon reverted to the former title with the addition of "and Relevant Provisions of Security Council Resolutions."

From 2006 through 2011 the Director General's reports settled into a pattern that differed little from report to report. They always ended with the standard statement that "While the Agency continues to verify the non-diversion of declared material at the nuclear facilities and LOFs (locations outside facilities) declared by Iran under its Safeguards Agreement, the

196 Statement by the President of the Security Council, S/PRST/2006/15, March 29 2006.

197 UNSC Resolution 1696 (2006), July 31, 2006.

198 UNSC Resolution 1737 (2006), December 27, 2006.

199 See Edward C. Luck, *UN Security Council: Practice and Promise* (London: Routledge, 2006), pp 22–27.

200 The Agency's technical assistance to the country in the peaceful uses of nuclear energy.

201 IAEA, *Cooperation between the Islamic Republic of Iran and the Agency in the light of United Nations Security Council resolution 1737 (2006)*, GOV/2007/7, (Vienna: IAEA, February 9, 2007).

Agency is not in a position to provide credible assurance about the absence of undeclared nuclear material and activities in Iran, and therefore to conclude that all nuclear material in Iran is in peaceful purposes.”²⁰² The Iranians complained about the “unusual” wording, saying that all that was needed, as the Iranian delegation had requested, was the standard wording used in SIRs for all states with CSAs, namely that the Agency had “verified the non-diversion of declared nuclear material and that all declared nuclear material was accounted for and remained in peaceful activities.”²⁰³ The Director General, now Yukiya Amano, declined to change his language. He responded that many formulations had been used in the past and there was no standard one. The existence of various formulations, he said, reflected “the evolving nature of the Iranian nuclear issue.”²⁰⁴ Here again the Secretariat was finding flexibility advantageous.

After 2006, in addition to reporting to Board meetings four times a year, and to the Security Council, the Director General and Secretariat engaged in high-level and technical talks both in Vienna and Tehran and developed a Work Plan with Iran to resolve key issues.²⁰⁵ It was never fully implemented due to continuing Iranian procrastination and prevarication. However the Agency continued to conduct inspections and analyzed an increasing range of information relevant to the Iran case. The various sections in the reports began to contract, however, as Iran either was able to satisfy the Agency about certain matters or because there was no progress to report.

Although the Agency had been concerned about weaponization issues for some time, in February 2008 a new heading appeared in the reports entitled “Possible Military Dimensions” (PMD). This arose as a result of new information from several member states²⁰⁶ (specifically a laptop) and became a new point of contention between the Agency and Iran. In November 2011, after much investigation and analysis, Director General Amano released a report with a 14-page Annex on “Possible Military Dimensions to Iran’s Nuclear Programme.”²⁰⁷ It discussed a range of matters not traditionally considered to be within

202 See for example, IAEA, *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran: Report by the Director General*, GOV/2014/58, (Vienna: IAEA, November 7, 2014).

203 IAEA Board of Governors, Record of the 1281st Meeting, GOV/OR.1281, September 15, 2010, http://cns.miis.edu/nam/documents/Official_Document/GOVOR1281PRL.link.pdf (accessed September 30, 2015), p. 3.

204 IAEA Board of Governors, Record of the 1281st Meeting, GOV/OR.1281, September 15, 2010, http://cns.miis.edu/nam/documents/Official_Document/GOVOR1281PRL.link.pdf (accessed September 30, 2015), p. 6.

205 IAEA Board of Governors, “Understandings of the Islamic Republic of Iran and the IAEA on the Modalities of Resolution of the Outstanding Issues,” Tehran, August 21, 2007, GOV/2007/48, Attachment (also issues as INFCIRC/711).

206 IAEA, *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007) and 1803 (2008): Report by the Director General*, GOV/2008/15, (Vienna: IAEA, May 26, 2008), pp. 3–5.

207 IAEA, *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran: Report by the Director General*, GOV/2011/65, (Vienna: IAEA, November 8, 2011), Annex.

the Agency's purview, including nuclear explosive development indicators, procurement activities, nuclear components for an explosive device, detonator development, high explosive and associated experiments, hydrodynamic testing, modelling and calculations, preparations for conducting a nuclear test, integration into a missile delivery vehicle and a fusing, arming, and firing system. In what sounded like taking a leaf from U.S. intelligence agencies' characterization of the reliability of intelligence data, the report said the Agency found the information it had received on PMD to be "overall, credible." Such language had not been seen before in IAEA reports. The Security Council reaffirmed Iran's obligation to cooperate fully with the Agency in resolving such matters.

The Iran case is clearly the most prolonged and difficult that the IAEA has had to deal with. Yet the Secretariat has never used the word non-compliance, even when referring to the Board decision of September 24, 2005. The Board itself never chose to use it again, nor did the Security Council. It would appear that all concerned agree that the use of the word is not essential and that what matters is establishing the facts of a case.

On July 14, 2015, after two years of negotiation, a Joint Comprehensive Plan of Action (JCPOA) was agreed by Iran which sets out further complex verification and non-compliance reporting tasks for the IAEA. On the same day, the Agency and Iran announced a complementary "Roadmap for the clarification of past and present outstanding issues regarding Iran's nuclear program". The implications of these new agreements for IAEA non-compliance reporting and the lessons of past non-compliance cases for the new Iran deal are considered in a postscript to this study.

Libya (2003–2008)

For the IAEA, the Libya case arose on December 19, 2003 when Libyan leader Colonel Gaddafi suddenly announced his decision to eliminate the country's WMD capabilities. The announcement was transmitted to the Director General and to the UN Security Council. Since Libya was a party to the NPT and had a CSA, concluded in 1980, this announcement by implication put Libya in non-compliance with both.

The case was complicated by the involvement of the United Kingdom and the United States in discussions with Libya months before its public announcement. American and British specialists had already travelled to Libya to visit projects and installations at more

than ten sites, including a nascent uranium enrichment facility.²⁰⁸ The IAEA had no knowledge of these activities until President George W. Bush and U.K. Prime Minister Tony Blair issued a statement on December 19.²⁰⁹ Initially the United Kingdom and United States planned, without IAEA involvement, to remove sensitive nuclear material and equipment, including weapon designs, from Libya and transfer them to the United States for inspection, verification, and storage. But Libya insisted that the Agency, a multilateral body it apparently trusted, should play its verification role.

The day after the announcement, on December 20, 2003, the Director General met in Vienna with a large Libyan delegation (ElBaradei describes it as “a small army” of 19 or 20 officials²¹⁰), which informed him that Libya had been engaged for more than a decade in developing a uranium enrichment capability. It had also obtained nuclear weapon design and fabrication documents.²¹¹ The following day ElBaradei met with U.S. and U.K. intelligence officers at his home in Vienna and berated their governments for not bringing such a significant safeguards violation to the attention of the IAEA.²¹² On December 22, he reported on his discussions to the Board. The written version²¹³ has not been publicly released by the Agency, but must have contained information on Libya’s commitments and revelations rather than a non-compliance assessment at that early stage. Verification would be required before that could be done. The Director General then visited Libya from December 27–29, accompanied by a senior Agency team of technical and legal experts. The group toured nine locations related to undeclared nuclear activities and initiated a verification process for the previously undeclared nuclear materials, equipment, facilities and activities. During the visit the Libyans confirmed their decision to conclude an AP and, pending its entry into force, to act as if it were in force.

Alarmed by press reports that U.S. and U.K. officials were about to fly to Tripoli to begin removing nuclear equipment from Libya, ElBaradei rang British ambassador Peter Jenkins to tell him that if this happened he would report to the Board that he would “no longer be in position to perform my responsibilities under the NPT because of interference by the

208 See Jack Boureston and Yan Feldman, “Verifying Libya’s nuclear disarmament” in Trevor Findlay (ed.), *Verification Yearbook* (London: VERTIC, 2004), for a detailed account of the Libya case.

209 Although ElBaradei had got wind of “something askew” at a meeting at the British Embassy in Vienna in May 2003 and immediately before the U.K./U.S. announcement (ElBaradei, pp. 148–149).

210 ElBaradei, p. 149.

211 IAEA, *Implementation of the NPT Safeguards Agreement of the Socialist People’s Libyan Arab Jamahiriya: Report by the Director General*, GOV/2004/12, (Vienna: IAEA, February 20, 2004).

212 ElBaradei, p. 150.

213 IAEA, *Implementation of the NPT Safeguards Agreement of the Socialist People’s Libyan Arab Jamahiriya: Report by the Director General*, GOV/2003/82, (Vienna: IAEA, December 20, 2003).

British and Americans.”²¹⁴ On January 19, 2004 he met with John Bolton, who had been dispatched by U.S. Secretary of State Colin Powell to resolve the dispute with the Agency. At a “technical briefing” at the U.S. embassy in Vienna it was agreed, according to ElBaradei, that the Agency needed to finish its verification job first—measurements, sampling, and other measures—and only then could the United States and United Kingdom remove the equipment from the country, in accordance with their agreement with Libya.

From January 20–29, 2004 a team of Agency inspectors, including nuclear weapon and centrifuge technology experts, visited Libya to continue the verification process. This is when Libya informed the Agency that, “pursuant to mutual understandings” with the United Kingdom and United States, it had agreed to transfer to the United States sensitive design information, nuclear weapon related documents, and most of the previously undeclared enrichment equipment, subject to IAEA verification requirements and procedures. The Agency had made clear, in accordance with the understanding reached with Bolton, that these artifacts were part of the Agency’s evidence and were to remain under Agency seal and legal custody until it had been able to verify the correctness and completeness of Libya’s declarations.²¹⁵

In addition to the original report to the Board in December 2003 the Director General submitted four subsequent ones to the Board, three in 2004 and one in 2008. In between there were special sections on Libya in the SIR. The first report to the Board, on February 20, 2004, described the details of the case, notably multiple failures by Libya to declare materials and activities as required by its safeguards agreement; provided an “initial assessment”; and set out next steps. It did not use the word “non-compliance” but concluded that “the above failures show that, over an extended time, Libya was in breach of its obligation to comply with the provisions of the Safeguards Agreement.”²¹⁶ The report also tantalizingly hinted at the existence of a sophisticated illicit nuclear trade network that turned out to be run by Pakistani scientist A.Q. Khan. The report had two annexes listing the sites declared by Libya and those inspected by the Agency.

In response to this report the Board, citing Article XII.C of the Statute, declared that Libya’s “past failure to meet the requirements of its safeguards agreement ... constituted non-compliance and, in accordance with Article XII.C., requested the Director

214 ElBaradei, p. 156. John Bolton does not mention the incident in his memoirs but he does mention the removal of Libyan materials and blueprints to the U.S. nuclear weapons laboratory at Oak Ridge, Tennessee (Bolton, p. 127).

215 IAEA, *Implementation of the NPT Safeguards Agreement of the Socialist People’s Libyan Arab Jamahiriya*; Report by the Director General, GOV/2004/12, (Vienna: IAEA, February 20, 2004), p. 3.

216 GOV/2004/12, February 20, 2004, p. 8.

General to report the matter to the Security Council for information purposes only, while commending Libya for the actions it had taken to date, and had agreed to take, to remedy the non-compliance.”²¹⁷ This was a new twist on the expected procedure set out in the Statute. Notwithstanding that the Director General did not use the term “non-compliance” (but “breach”), the Board declared Libya to be in non-compliance. However, it then proceeded to tell the Security Council, as it had done in the Romania case, that this was for its information only.

This route was taken, presumably, to indicate the Agency’s view that the issue was being resolved, that the Board was suitably “seized” of it, and that it did not require action by the Council. Given that Libya was cooperating fully and voluntarily surrendering its capabilities the situation hardly constituted a threat to international peace and security. Libya itself, with the Iraq precedent in mind, wanted reassurance that no member of the Council would use its “referral” as a basis for taking military action. Other governments were also acutely aware of the precedential effect—if Libya was rewarded for returning to compliance and reported to the Council for information purposes only, this could encourage others like Iran to cooperate.

In reality the IAEA Board of Governors cannot dictate to the Security Council what it does with the information it provides: it is up to the Council to determine whether there is a threat to international peace and security and take any action it deems fit. But since the permanent five members of the Council are always represented on the Board, this maneuver was clearly done with at least their acquiescence (although not with that of the non-permanent members of the Security Council at the time unless they happened to also be on the Board).

The third report on Libya by the Director General to the Board came on May 28, 2004. It happily reported that great progress had been made in verifying Libya’s activities and that the Libyans were showing exemplary cooperation: “Libya has cooperated with the Agency by providing prompt access to all locations that it had requested, making senior personnel available and taking corrective actions to come into compliance with its Safeguards Agreement.”²¹⁸ The body of the report was relatively short at four pages, but it included detailed annexes on the Agency’s verification activities and findings since February 2004 and lists of sites declared and inspected. It also appended the statement by the President of the Security Council on April 22, 2004 which welcomed Libya’s steps to divest itself of its WMD programs and lauded the work of the IAEA and the Organization for the Prohibition of Chemical Weapons (OPCW) in the chemical field.

²¹⁷ Quoted in IAEA, *Implementation of the NPT Safeguards Agreement of the Socialist People’s Libyan Arab Jamahiriya; Report by the Director General*, GOV/2004/33, (Vienna: IAEA, May 28, 2004), p. 2.

²¹⁸ GOV/2004/33, p. 4.

The fourth report, on August 30, 2004, simply updated the previous one, including recording that three instances of complementary access had been obtained under the terms of Libya's new AP.²¹⁹ Libya had continued to demonstrate "good cooperation" (reading between the lines the use of this expression seems to hint that cooperation was not perfect). The Agency assessed that Libya's declaration about most of its activities appeared to be consistent with the information available to and verified by the Agency, but there were still some areas that needed further investigation "in order to fully verify the completeness and correctness of Libya's declarations." These investigations were ongoing. The report noted that the ability of the Agency to assess the extent to which Libya had taken any "concrete steps in connection with the information on weapon design and fabrication" would benefit from additional information, including from suppliers and contractors involved in the clandestine supply network that had supported the program.²²⁰ This indicated that the Libyans themselves could only go so far in detailing what had occurred. The report ended with an overall assessment and "next steps," but no further annexes.

The final special report on Libya to the Board came four years later in September 2008 (with special sections in the SIR in the intervening years).²²¹ The Director General reported that the Agency had carried out further inspections, complementary access, and design information verification and held a number of meetings with Libyan authorities and individuals involved in the A.Q. Khan network. The report concluded that the Agency had been able to verify the non-diversion of declared nuclear material in Libya. It also concluded that Libya's statements regarding the acquisition of centrifuge enrichment technology and equipment are "not inconsistent with the Agency's findings." Regarding other parts of the "front and back end of the nuclear fuel cycle," mainly in the form of documentation (presumably blueprints), Libya's statements were also "not inconsistent with the Agency's findings."

In a footnote the Secretariat set out definitions of its terms, as it had done for the Iran reports in 2008.²²² The Secretariat explained that by "consistent" it meant that "the information made available to it by the State is internally consistent and consistent with the Agency's findings and all information available to it." The Secretariat used the term "not inconsistent," it said, to refer to instances where there is insufficient information available

219 IAEA, *Implementation of the NPT Safeguards Agreement of the Socialist People's Libyan Arab Jamahiriya; Report by the Director General*, GOV/2004/59, (IAEA: Vienna, August 30, 2004).

220 GOV/2004/59, p. 7.

221 IAEA, *Implementation of the NPT Safeguards Agreement of the Socialist People's Libyan Arab Jamahiriya; Report by the Director General*, GOV/2008/39, (Vienna: IAEA, September 12, 2008).

222 GOV/2008/39, p. 5, fn. 4.

to confirm the information made available by the State (for example, if the events took place many years in the past). “The confidence level in the second instance,” the Secretariat said, “is therefore lower, but the Agency has no credible information contradicting the statements made by the State.”

Essentially the report concluded that the Libya case was no longer active. The Director General, choosing his words carefully, said the Secretariat “considers that the issues that had been reported to the Board of Governors are no longer outstanding at this stage.”²²³ To make clear that this was not a “clean bill of health” (which the Agency never gives any state on the grounds that verification always continues no matter how good a state’s record), the report added that the Agency would continue to implement safeguards in Libya “as a routine matter and work to reach a conclusion about the absence of undeclared nuclear material and activities in Libya.” This would lead to the “broader conclusion” and the possibility of implementing integrated safeguards—essentially the gold standard. The Agency would, in the meantime, keep a watchful eye out. The Board of Governors concurred with the Director General’s conclusion and adopted a resolution echoing his words.²²⁴

South Korea (2004)

In August 2004 the Republic of Korea (ROK), in connection with the submission of its initial declaration pursuant to its AP, informed the Secretariat that it had discovered, in June of that year, laboratory scale experiments involving the enrichment of uranium using the atomic vapor laser isotope separation (AVLIS) method that had not been declared to the Agency. The work had been carried out in 2000 by scientists at the Korea Atomic Energy Research Institute (KAERI) in Daejeon. South Korea reported that only about 200 milligrams of enriched uranium were produced, following which the experiments were terminated and the installation dismantled.²²⁵

The Agency promptly dispatched an on-site inspection team in August 2004 to verify “this and other related information,” followed by further inspections in September and November. During the inspections the ROK informed Agency personnel that its scientists had also conducted uranium conversion activities in the 1980s. Moreover, in the early 1980s laboratory scale experiments had been performed at the TRIGA Mark III research reactor at the KAERI site in Seoul to irradiate 2.5 kilograms of depleted uranium (DU) and to

²²³ GOV/2008/39, p. 7.

²²⁴ IAEA Board of Governors resolution, GOV/2008/51/Rev.2, September 24, 2008.

²²⁵ IAEA, *Implementation of the NPT Safeguards Agreement in the Republic of Korea*, GOV/2004/84, (Vienna: IAEA, November 11, 2004).

study the separation of uranium and plutonium. The ROK said that all of the experiments were conducted without the knowledge or authorization of the government. Finally, in response to an enquiry by the Agency, based on open source information, the ROK provided information in October 2004 on an experiment carried out between 1979 and 1981 to assess a chemical exchange process to confirm the feasibility of producing uranium enriched to 3 percent U-235. The Director General informed the Board orally on September 13, 2004 that an inspection was underway and noted that it was “a matter of serious concern that the conversion and enrichment of uranium and the separation of plutonium were not reported to the Agency as required by the ROK Safeguards Agreement.”²²⁶

The case resulted in a single written report by the Director General to the Board, on November 11, 2004. It laid out in detail the facts of the case as verified by the Secretariat. The report did not use the word “non-compliance” or even any equivalent, but labelled what it described as “failures by the ROK to report these activities in a timely manner” as “a matter of serious concern,” the same language used in the initial, oral report by the Director General to the Board.²²⁷ The report noted that South Korea had provided “active cooperation” to the Agency in its verification activities and had taken “corrective actions,” presumably to bring itself back into compliance. ElBaradei reports that South Korea was so embarrassed by the revelations that it fired staff and established a new oversight organization.²²⁸

The Board did not adopt a resolution in response. The summary conclusion by the Chair, Canadian Governor Ingrid Hall, said the Board “shared the Director General’s view that the failure of the Republic of Korea to report these activities in accordance with its safeguards agreements is of serious concern.”²²⁹ But she noted that the quantity of nuclear material involved had “not been significant” and there was no indication that undeclared experiments had continued. Her statement on behalf of the Board simply took note of the Director General’s conclusions and requested him to report as appropriate.

The U.S. administration was divided on the question of reporting the case to the UN Security Council. The Korea desk at the State Department and others were eager that a key U.S. ally not be treated the same as Iran, especially given the implications for pursuing the North Korea case. This did not stop Undersecretary of State John Bolton suggesting that

226 GOV/2004/84, p. 2.

227 GOV/2004/84, p. 8.

228 ElBaradei, p. 216.

229 “IAEA Board concludes consideration of safeguards in South Korea,” IAEA staff report, November 26, 2004, <https://www.iaea.org/newscenter/news/iaea-board-concludes-consideration-safeguards-south-korea> (accessed September 22, 2015).

reporting South Korea to the Council would prove that it was not seeking nuclear weapons.²³⁰ There were, however, suspicions that he was doing so to pave the way for “referring” Iran to the Council.²³¹ South Korea was reported to be lobbying intensely in Washington against such a referral on the very grounds that it did not wish to be equated with North Korea and Iran.²³²

At the November 2004 Board meeting the U.S. ambassador argued that South Korea’s violation was not worth reporting to the Council. ElBaradei took this as endorsement of the Secretariat’s approach to non-compliance reporting: “The entire incident vindicated and put a seal on the correctness of the Secretariat’s interpretation of how and when various degrees of non-compliance ought to be reported to the council—a judgment that contradicted the initial U.S. position of automatic referral, as the Americans were advocating in the case of Iran.”²³³

Pierre Goldschmidt, then DDG for safeguards, describes the Board’s decision not to adopt a resolution finding South Korea to be in non-compliance and therefore not reporting the case to the Security Council as “setting an unfortunate precedent motivated at least in part by political considerations.”²³⁴ He does not elaborate on what these considerations were, but says it was clear that South Korea was in non-compliance. He believes the case was more egregious than the Board recognized, as the South Koreans had undertaken a number of sensitive activities over an extended period and initially took some actions which could be interpreted as attempts to conceal past failures. He points out that the Director General’s report itself records that in 2002 and 2003 South Korea refused requests by the Agency to visit KAERI’s Laser Technology Center, refused to acknowledge in 1999 that it had conducted plutonium separation experiments, and did not report in August 2004 all past conversion activities. Olli Heinonen concurs that the Agency had suspicions up to a decade prior to the revelations that the ROK was not being as transparent as it should be about its nuclear activities.²³⁵

The SIR for 2004 had a separate section on the ROK which repeated much of the information in the Director General’s report to the Board. It noted that “verification of the correctness

230 A U.S. official quoted Bolton as saying, “There can be many ways to deal with South Korea’s nuclear material experiments. If they were just scientific experiments, not part of a nuclear program, one way can be reporting the case to the UN Security Council.” See “Bolton suggests referring South Korean nuclear case to UN Security Council,” *Global Security Newswire*, October 29, 2004, <http://www.nti.org/gsn/article/bolton-suggests-referring-south-korean-nuclear-case-to-un-security-council/> (accessed September 22, 2015).

231 Jonathan Wolfsthal, “Seoul should not fear the United Nations Security Council,” Carnegie Endowment for International Peace, <http://carnegieendowment.org/2004/11/23/seoul-should-not-fear-united-nations-security-council> (accessed September 22, 2015).

232 ElBaradei, p. 217.

233 ElBaradei, p. 217.

234 Pierre Goldschmidt, “Exposing nuclear non-compliance,” *Survival*, Vol. 51, No. 1, February 2009, p. 152.

235 Interview with Olli Heinonen, Harvard, June 5, 2015.

and completeness of the ROK's declarations is ongoing."²³⁶ The ROK was also mentioned namelessly on the front page of the public Safeguards Statement as one of three states (humiliatingly, along with Iran and Libya) with CSAs and APs in force (Iran at that stage was acting as if its AP was in force) but which "had been found to have previously engaged in nuclear activities of varying significance which they had failed to report." Subsequent SIRs contained no special section on South Korea. The statement for 2005 included it in the list of states with an AP, for which, as a standard matter, "evaluations regarding the absence of undeclared nuclear material and activities...remained ongoing."²³⁷ The same occurred in the Statement for 2006.

By 2007, due to South Korea's full cooperation in implementing its AP, the Secretariat was able to report in the SIR for that year that "it had found no indication of undeclared nuclear material from peaceful activities" and that it had concluded that "all nuclear material" remained in peaceful activities—the so-called broader conclusion. The ROK finally made it to the highest status list—states which are eligible for integrated safeguards.²³⁸ The SIRs and Safeguards Statements are so elliptical and complicated that only the safeguards cognoscenti and South Korea would have noticed.

Egypt (2004–2005)

The Egypt case, like the South Korea one, was short-lived and resolved quickly by the Agency and the country concerned. It began when safeguards staff noticed information in scientific publications indicating activities and materials that Egypt had not reported in its safeguards declaration. Olli Heinonen says the case began when he wondered about the types of materials Egypt possessed, not just the amounts, as traditionally declared and verified during inspections.²³⁹ These materials were those involved in uranium extraction and conversion, irradiation of uranium targets, and reprocessing.

On September 21, 2004 the DDG for Safeguards met with the Chairman of the Egyptian Atomic Energy Authority (AEA) to discuss "a number of issues related to the implementation

²³⁶ IAEA, *Safeguards Statement for 2004*, p. 9.

²³⁷ IAEA, *Safeguards Statement for 2005*, p. 1 and 11.

²³⁸ These were states with an AP "which had conducted a comprehensive State evaluation based on all information available to the Agency about the State's nuclear and nuclear-related activities (including declarations submitted under the additional protocol, and information collected by the Agency through its verification activities and from other sources); implemented complementary access, as necessary, in accordance with the State's additional protocol; and addressed all anomalies, questions and inconsistencies identified in the course of its evaluation and verification activities." IAEA, *Safeguards Statement for 2007*, p. 5, para. 12.

²³⁹ Interview with Olli Heinonen, Harvard, June 5, 2015.

of safeguards that the Agency had identified.”²⁴⁰ The Egyptians agreed to permit an Agency visit to the relevant site at Inshas to assess the situation. A team of inspectors visited between October 9 and 13, 2004, followed by another meeting between Egyptian and Agency representatives in Vienna on November 22–23. Further rounds of inspections and discussions occurred in January and February 2005. Egypt provided additional information on the previously undeclared material and activities and submitted modified and new design information for a nuclear chemistry building.

The one and only report by the Director General to the Board on the case was submitted on February 14, 2005.²⁴¹ It did not use the word “non-compliance.” After describing the case and the efforts by Egypt and the Agency to resolve it, he asserted that “repeated failures by Egypt to report nuclear material and facilities to the Agency” were “a matter of concern.” This was essentially the same formulation used in the South Korea case. His report noted that the Agency’s verification of the “correctness and completeness” of Egypt’s declarations was “ongoing,” pending further analysis. It also pointed out that the case was “complicated by the fact that some of the activities involved were carried out between 15 and 40 years ago.” The Director General undertook to continue to report to the Board on the issue “as appropriate.” The Board did not adopt a resolution on Egypt but, as reflected in the Chair’s summary of the discussion, simply endorsed the Director General’s report.²⁴²

The Director General never did produce another report to the Board on Egypt, suggesting that the Agency was satisfied with Egypt’s responses and that it had returned to compliance. The case was not mentioned in the 2005 SIR or in subsequent ones until 2008.²⁴³ This gave the false impression, according to then DDG for Safeguards Pierre Goldschmidt, that the issue had been resolved.²⁴⁴ At the time Goldschmidt had been keen, according to Olli Heinonen, to officially accuse the Egyptians of non-compliance.²⁴⁵

A further safeguards anomaly occurred in Egypt in 2007 and 2008 when inspectors discovered HEU particles in an environmental sample taken at Inshas. The Agency’s head of external relations, Vilmos Cserveny, revealed the finding in a speech at an NPT-related conference.²⁴⁶ The Egyptian government sent a letter to ElBaradei via the Egyptian ambassador

240 IAEA, *Implementation of the NPT Safeguards Agreement in the Arab Republic of Egypt: Report by the Director General*, GOV/2005/9, (Vienna: IAEA, February 14, 2005), p. 1.

241 GOV/2005/9.

242 According to Goldschmidt, “Exposing nuclear non-compliance,” p. 149.

243 IAEA, *Safeguards Statement for 2008*.

244 Goldschmidt, “Exposing nuclear non-compliance,” p. 155.

245 Interview with Olli Heinonen, Harvard, June 5, 2015.

246 The incident is recounted in ElBaradei’s memoirs (ElBaradei, pp. 220–221). Cserveny denies the suggestion that ElBaradei was not aware of what he intended to say in his speech (conversation with the author, Vienna, July 9, 2015).

to the IAEA, Ihab Fawzy, that accused the Agency of disclosing classified information and making technically and factually incorrect statements in a political forum, due to “either a lack of professional competence or ill intention.”²⁴⁷

In his memoirs ElBaradei records that in his reply he reminded Fawzy of the “mess” that the Agency had encountered in Egypt in regard to the earlier safeguards breaches and the help the Agency had provided Egypt in getting its “house in order.”²⁴⁸ ElBaradei warned the ambassador to officially withdraw the letter or he would go to the Board “with a response that included a detailed account of the incompetence we had needed to deal with.” Within days the Agency received a conciliatory letter to which the Agency responded with details of the technical and factual basis for the Agency’s statement. The Director General had successfully used the threat of a report to the Board to induce a state to resolve a non-compliance controversy.

The 2007 incident thus did not result in a report to the Board, with or without a finding of non-compliance. It is mentioned in the SIR for 2008 in a one-page special section that also deals with the previous incident. It records that Egypt had “clarified” the previous outstanding issues, along with discovering between 2004 and 2006 additional nuclear material previously undeclared to the Agency (including HEU particles). The Agency’s *Safeguards Statement for 2008*, a public summary of the SIR, recorded that “the Agency has concluded that Egypt’s statements are consistent with the Agency’s findings, and ... the issues raised in the report to the Board are no longer outstanding.”²⁴⁹ With regard to the HEU particles the report said the Agency had not yet identified the source (the Egyptians said they believed they came into the country on contaminated radioisotope transport containers), but would continue “to seek to clarify this issue as part of its ongoing verification activities.” Writing in November 2010, after he had left the Agency, Olli Heinonen noted that “the Egyptian case, relating to the presence of highly enriched uranium particles, has yet to be resolved.”²⁵⁰

Pierre Goldschmidt is critical of the Agency’s failure to mention the new revelations about Egypt until the 2008 SIR and about the lack of explanation as to why the 2004 issues are no longer outstanding. He also questions the validity of applying to Egypt the standard conclusion that “The Agency found no indication of the diversion of declared nuclear

247 Olli Heinonen accuses the Egyptians of “cheating, lying, threatening” (Interview with Olli Heinonen, Harvard, June 5, 2015).

248 ElBaradei, pp. 220–221.

249 IAEA, *Safeguards Statement for 2008*, p. 11.

250 Olli Heinonen, “The Case for an Immediate IAEA Special Inspection in Syria,” *PolicyWatch* 1715, The Washington Institute for Near East Policy, Washington, D.C., November 5, 2010, p. 1.

material in Egypt. Therefore the Agency was able to conclude for Egypt that all declared nuclear material remained in peaceful activities.” While technically correct, he says it is “misleading” and “sends a reassuring message even as it does not address the additional undeclared nuclear material and HEU particles found in Egypt.” There was also no mention of the possibility of further undeclared material remaining in Egypt, despite the fact that the Agency is today interested in the completeness as well as correctness of states’ declarations.

It is noticeable that the report speaks of the Agency rather than the Secretariat as reaching this conclusion, presumably because the SIR, on which the Safeguards Statement is based, had been noted and approved for release by the Board by that stage. In this way the Secretariat sees itself as receiving the endorsement of, and political cover for, its safeguards conclusions. This proposition would, however, be rejected by many, if not all Governors, not least because the SIR is so cryptic that the Board does not have sufficient information to endorse wholeheartedly the Secretariat’s conclusions.

Goldschmidt contends that like the South Korea case, the Egypt one set “an unfortunate precedent.”²⁵¹ In declining to report Egypt to the Security Council the Board, he concludes, took into account the South Korea precedent, its wish not to put it in the same category as Iran, Egypt’s cooperation with the Agency and the corrective actions it had taken. He also says it seems the Board did not consider Egypt’s activities “a matter of proliferation concern” since they had been revealed in open source publications, some of the activities took place between 15 and 40 years ago, and the amount of undeclared nuclear material involved was small. Goldschmidt argues that “none of these possible justifications can be considered satisfactory.”²⁵²

Mohamed ElBaradei says the problems in Egypt “appeared to be rooted in a lack of oversight and control, as well as in sloppiness and neglect.”²⁵³ He says he was told the Egyptians tried to delay the initial inspection, not to hide evidence, but to literally “clean the place up” out of embarrassment.²⁵⁴ This implies an inadvertent rather than deliberate case of non-compliance. He says there was no evidence that Egypt had a nuclear weapons program. There was some sensitivity about the Egyptian case since ElBaradei himself was Egyptian. Despite allegations that he was likely to be soft on his country of origin, he was

251 Goldschmidt, “Exposing nuclear non-compliance,” p. 152.

252 Goldschmidt, “Exposing nuclear non-compliance,” p. 154.

253 ElBaradei, p. 218.

254 ElBaradei says the facilities at the Inshas Nuclear Research Centre were run down. There were rooms that had not been opened in a decade and equipment worth millions of dollars that had never been used (ElBaradei, p. 218).

on the contrary reportedly keen to pursue the case, not least because at the time he was standing for re-election.²⁵⁵ He says in his defense: “Of course I acted as I would have with any other country, striving to reach decisions with the greatest possible independence and objectivity: I emphasized to my colleagues at the Agency to apply the same standards to Egypt’s nuclear file as to any other.”²⁵⁶

Syria (2008–Present)

The Syria non-compliance case has been the most bizarre of all, since none of the parties directly affected were keen to raise the issue at the Agency or to take action in response—neither Israel, which attacked an alleged undeclared nuclear reactor site in Syria in September 2007 but was loath to admit it; Syria itself, since it had been likely caught in non-compliance with its safeguards agreement; the Arab states, which stayed silent;²⁵⁷ nor the United States and its allies,²⁵⁸ which would normally be keen to pursue a non-compliance case against a proliferant state. To date there have been 15 reports on Syria by the Director General to the Board, none of them using the term “non-compliance.”

Director General ElBaradei first alerted the Board of Governors in an oral report on June 2, 2008 that the Agency had received information alleging that the installation destroyed at Dair Alzour was a nuclear reactor.²⁵⁹ This was just over a month after the United States provided the Agency with information it believed indicated that the installation was a nuclear reactor, but nine months after the attack itself.²⁶⁰ According to this information the reactor was not yet operational and no nuclear material had been introduced into it.²⁶¹ Satellite imagery was provided by at least two intelligence agencies. One of these agencies revealed the presence of an individual who appeared to be a North Korean whom Agency personnel recognized from their dealings with the DPRK.²⁶²

255 Interview with Olli Heinonen, Harvard, June 5, 2015. In any event there was no love lost between ElBaradei and the Egyptian government, which had not supported his candidacy for Director General.

256 ElBaradei, p. 220.

257 ElBaradei, p. 230.

258 ElBaradei, p. 232.

259 IAEA Board of Governors, GOV/OR 1206, June 2, 2008, paras. 26 and 28.

260 IAEA, “Statement by IAEA Director General ElBaradei,” Press Release 2008/06, April 25, 2008, <https://www.iaea.org/newscenter/pressreleases/statement-iaea-director-general-mohamed-elbaradei> (accessed September 23, 2015).

261 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic*, GOV/2008/60, (Vienna: IAEA, November 19, 2008). ElBaradei told U.S. undersecretary of state for arms control and disarmament John Rood that by not informing the IAEA before the Israeli bombing that a suspected nuclear reactor was being built in Syria (the Israelis had alerted the U.S. in 2006 and the Americans had reached the same conclusion by 2007) the Agency was being made “to look like fools” (ElBaradei, p. 231). ElBaradei issued a press release to that effect.

262 ElBaradei, p. 233.

By this time the Agency had already informed Syria that it intended to send a team of inspectors to Syria to “review all information” and visit the Dair Alzour site and three other locations alleged by some member states to be “functionally related.” After inviting him to Vienna, ElBaradei informally discussed with the head of the Syrian Atomic Energy Commission, Ibrahim Othman, the “modalities” for verifying the claims.²⁶³ The latter insisted that the facility was for missile production. ElBaradei emphasized the importance of Syria showing maximum transparency. Syria later formally agreed to an Agency visit to Dair Alzour and to the taking of environmental samples.

The Director General reported on the outcome five months later in his first written report on Syria to the Board, on November 19, 2008.²⁶⁴ The Agency visit, which took place from June 22–24, was led by Olli Heinonen, DDG for Safeguards. It involved meetings with Syrian authorities in Damascus on June 22 and 24 and a visit to the site on June 23. Syria provided unrestricted access to all buildings on the site, “as a transparency measure,” and reiterated its claim that the site was a military installation unrelated to any nuclear applications. By that time the bombed facility had been completely razed by the Syrian authorities and a new building constructed. Syria did not accede to the Agency’s request for documentary evidence to support its claim that it was a missile production facility. Nor was it willing to show the Agency the debris resulting from the attack. The Agency also asked for clarification of certain procurement activities by Syrian entities but to no avail. In a follow-up letter dated July 3, 2008 the Agency proposed dates for another visit but Syria responded that it should be postponed until “the necessary arrangements have been made with the bodies concerned.”

In October 2008 the Agency provided Syria with the results of laboratory analysis of environmental samples which indicated the presence at the site of particles of “anthropogenic” uranium (natural uranium which had been subjected to chemical processing). A request for a meeting to discuss the results was declined by the Syrians, who claimed the particles were from Israeli bombs.²⁶⁵ Israel also declined the IAEA’s request to provide evidence that led it to suspect that the site was a nuclear reactor. This triggered a sharp exchange during the June 2009 Board meeting between ElBaradei and the Israeli Ambassador, Israel Michaeli.²⁶⁶ According to ElBaradei, Michaeli accused the Agency of making “redundant demands” on Israel which showed “political bias.” He implied that the Agency, by not

²⁶³ ElBaradei, p. 231.

²⁶⁴ GOV/2008/60.

²⁶⁵ Syria expressed dissatisfaction with the earlier leaking of the results to the media, claiming that this indicated that some parties were attempting to use the Agency’s activities for “political purposes” (GOV/2008/60, fn 5).

²⁶⁶ ElBaradei, p. 235.

calling for a special inspection, was not using all the tools in its toolkit. In response ElBaradei said Israel should be “deplored” for not allowing the Agency to do what it was supposed to do under international law, namely verifying alleged violations of safeguards agreements when suspicions first arose.

The Director General was clearly frustrated at the unusual reluctance of Board members to support the Agency on the Syria case.²⁶⁷ He mentions in his book the silence of Australia, Canada, the European Union, and Japan over the Israeli attack and the apparent willingness of the United States and United Kingdom to let the case quietly rest.²⁶⁸ He suspected “backroom political considerations” and an unwillingness to alienate Syria, which the West sought to wean away from its ally Iran. Yet ElBaradei also opposed a special inspection, which Western states were pressing the Agency to request, because “there was no obvious legal basis for such a request.”²⁶⁹ This is odd reasoning. Syria clearly had not been transparent about its nuclear activities and there was sufficient evidence of undeclared activities in addition to the bombed facility to warrant a request for a special inspection. Olli Heinonen and others supported the idea on the grounds that there was an “impasse” (ElBaradei himself says “we were stuck”²⁷⁰) and “challenges should not be allowed to persist and become increasingly complicated.”²⁷¹

ElBaradei records that he sought to use a back channel by sending an appeal for Syrian cooperation through a Syrian businessman with direct access to President Bashar al-Assad.²⁷² A message came back saying al-Assad appreciated his efforts. Curiously there was no denial that Dair Alzour had been a nuclear reactor site. This incident is another indication that non-compliance cases do not always follow the official, legally authorized, path but can, at times, be an intensely human process with all the possibilities and pitfalls that that involves.

The flurry of reports by the Director General from 2009 onwards (up to four a year), reflected the discovery of additional matters of concern as the Agency sought to use as many techniques as possible, short of on-site inspections, to fathom the Syria case. Many of these reflected lessons learned from previous non-compliance cases. Often they reported no substantive progress in resolving any of the issues, which seemed to multiply with time. With no progress on the Dair Alzour issue the reports tended to simply repeat that story, while the new issue of suspected safeguards violations at the Miniature Neutron Source Reactor (MNSR) in Damascus

²⁶⁷ ElBaradei, p. 232.

²⁶⁸ ElBaradei, p. 233.

²⁶⁹ ElBaradei, p. 234.

²⁷⁰ ElBaradei, p. 235.

²⁷¹ Heinonen, “The case for an immediate IAEA special inspection in Syria,” p. 2.

²⁷² ElBaradei, p. 235.

assumed increasing prominence. None of the reports accused Syria outright of non-compliance, but all expressed concern and urged Syria to cooperate. When Syria claimed it had no obligation to grant the Agency further access to Dair Alzour as it was a military site, the Agency offered to discuss the possibility of managed access.

In June 2009 the Director General reported that anthropogenic natural uranium particles had unexpectedly also been found in environmental samples taken in 2008 from the hot cells of the MNSR, to which the Agency continued to have access under Syria's CSA.²⁷³ Also reported were large quantities of graphite and barium sulphate at the Dair Alzour site. Finally the Agency had requested information on a North Korean import-export company and scientific cooperation between Syria and the DPRK. While Syria had sought to provide some information, its response was, overall, unsatisfactory. The Director for Safeguards Operations B, Herman Nackaerts, told the U.S. mission that the Syria case was starting to look like Iran in that the government provided "good cooperation" in some areas but presented a "stalemate" on others.²⁷⁴

When Syria attempted in a letter dated November 5, 2009 to provide an explanation for the particles found at the MNSR the Agency announced its intention to carry out an inspection at the facility to take samples of the yellowcake and undeclared uranyl nitrate that Syria claimed were the source of the particles.²⁷⁵ Olli Heinonen had proposed this to the new Director General, Yukiya Amano, as "a means to keep the pressure on Damascus."²⁷⁶ He was pleased that Amano had approved his gambit, even after others in the Secretariat had counseled a less confrontational approach. Syria refused to accept the inspection, partly on the implausible grounds that key Syrian personnel had obligations in supporting the Syrian delegation at IAEA Board meetings.

Syria ultimately accepted an inspection at the MNSR on November 17, 2009, and permitted an interview with one of the personnel involved in experiments there, but subsequently failed to satisfy Agency requests for further clarification.²⁷⁷ In his reports the Director General began to urge Syria to bring into force an AP to "further facilitate the Agency's work in verifying the correctness and completeness of Syria's declarations."²⁷⁸

273 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2009/36, (Vienna: IAEA, June 5, 2009), p. 2.

274 "U.S. embassy cables: Iran hid full reactor plans from nuclear inspectors," *The Guardian*, May 24, 2015, <http://www.theguardian.com/world/us-embassy-cables-documents/237693> (accessed September 23, 2015).

275 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2009/75, (Vienna: IAEA, November 16, 2009), p. 2.

276 As reported in a U.S. cable from Vienna leaked to Wikileaks: see <http://www.wikileaks-forum.com/cablegate/7/wikileaks-cables-preparing-for-syria-at-march-iaea-board-of-governors-meeting/17137/5;wap2> (accessed September 23, 2015).

277 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2010/11, (Vienna: IAEA, February 18, 2010), para. 11.

278 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2010/29, (Vienna: IAEA, May 31, 2010), p. 4.

A leaked U.S. mission report on a February 24, 2010 technical briefing by IAEA Secretariat personnel for Board members gives an insight into the challenges the Secretariat faces in assessing non-compliant behavior by states.²⁷⁹ When asked whether Syria's refusal to accept an inspection at a declared site like the MNSR was unusual and constituted a violation of its safeguards agreement, DDG for Safeguards Olli Heinonen said that inspections typically can shift a day or two, for technical reasons, from what the Agency requests, but normally a state offers an alternative well in advance. Legal Advisor Johan Rautenbach said a flat out refusal would "not be consistent with safeguards obligations," but quickly added that he understood discussions were underway to reschedule the inspection. It is notable that the Syrian ambassador and the head of the Syrian Atomic Energy Commission attended the technical briefing but sat at the back of the room and did not speak.

Heinonen later privately expressed frustration with the Legal Advisor's opinion, saying that "we had been handed a golden ticket" by Syria's outright refusal and that the Board should respond, as this was a real test. He said he himself would have called it non-compliance. The U.S. mission reported that likeminded colleagues at the briefing noted that the Legal Advisor had "caught himself and stopped just short after audibly beginning to articulate the word 'violation.'"²⁸⁰ Heinonen told the U.S. mission that Amano had also approved a request, put to the Syrians in August 2010, for access to the Homs facility where Syrian yellowcake used in the undeclared MNSR experiments was processed (under a CSA this was before the "starting point" for safeguards inspections). This would not be in the form of a special inspection, nor would it replace the MNSR inspection.²⁸¹

As to special inspections, Heinonen told the U.S. representative that he would need to see evidence of strong support by member states for the regular MNSR inspection that the Agency had requested before he would believe that member states would support a special inspection. Here is an indication that the Secretariat, as would be expected, necessarily weighs the likelihood of member state support before contemplating asking for a special inspection, even though the Secretariat is not required to have the formal prior approval of member states.

The U.S. mission reported that U.K. Foreign Minister Gordon Brown's foreign policy advisor had told Amano that with respect to a special inspection in Syria, he "cannot slay too

279 <http://www.wikileaks-forum.com/cablegate/7/wikileaks-cables-preparing-for-syria-at-march-iaea-board-of-governors-meeting/17137/5;wap2> (accessed September 25, 2015).

280 <http://www.wikileaks-forum.com/cablegate/7/wikileaks-cables-preparing-for-syria-at-march-iaea-board-of-governors-meeting/17137/5;wap2> (accessed September 25, 2015).

281 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2010/47, (Vienna: IAEA, September 6, 2010), p. 4.

many dragons at once,” implying that the continuing Iran case complicated his ability to deal with Syria. As the number of non-compliance cases has multiplied without resolution the Secretariat is having to consider their inter-relationship, not just when there might be technical links, as in the case of the Syria/North Korea nexus, but also the political traffic that the Agency’s verification and non-compliance system can bear. On the other hand U.S. ambassador Glynn Davies appeared to believe “we are inexorably heading toward a possible special inspection.”²⁸²

On September 3, 2010 the Syrians agreed with the IAEA on an Iranian-style “plan of action” for resolving the inconsistencies in Syria’s inventory declarations of uranyl nitrate, including access to Homs for the purpose of determining the extent of any uranium processing activities and nuclear material at that site. One of the few publicly available records of a Board of Governors meeting, held on September 15, 2010,²⁸³ offers an insight into the complexities the IAEA Secretariat faces in reporting on non-compliance. At that meeting the Egyptian ambassador, speaking on behalf of the NAM, welcomed Syria’s cooperation with the Agency and the new plan of action. He also recalled the NAM’s prior requests that reports by the Director General should contain “the Agency’s assessment on [sic] how Israel’s bombing of the Dair Alzour site, and its lack of cooperation, might affect the Agency’s ability to resolve the related outstanding issues and broader aspects of the future of the Agency’s safeguards regime, and on how the absence of satellite imagery of the Dair Alzour site for a period of six weeks following its destruction might be explained.” The NAM requested that the Director General issue an addendum to his report to fully address these concerns. In December 2010, with no progress being made on the Syria action plan, the Director General told the Board that he had written directly to the Syrian Minister for Foreign Affairs, Walid Al-Moualem, to request prompt access to information and locations that the Agency previously indicated it needed.²⁸⁴

The nine-page report of May 2011 by the Director General to the Board was the longest on Syria to date and a watershed document. It contained a detailed “Assessment of the Dair Alzour Site.”²⁸⁵ In his opening statement to the Board, Director General Amano said “[T]his is the best assessment of the agency, based on all the information in its possession.” After years of fruitless attempts to convince Syria (and Israel) to provide clarification and additional information he announced that the Agency now believed the destroyed building was

282 <http://www.wikileaks-forum.com/cablegate/7/wikileaks-cables-preparing-for-syria-at-march-iaea-board-of-governors-meeting/17137/5;wap2> (accessed September 23, 2015).

283 IAEA Board of Governors, Record of 1281st Meeting, GOV/OR.1281, September 15, 2010, http://cns.miis.edu/nam/documents/Official_Document/GOVOR1281PRL.link.pdf (accessed September 30, 2015).

284 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2011/8, (Vienna: IAEA, February 25, 2011), p. 3.

285 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2011/30, (Vienna: IAEA, May 24, 2011), p. 3.

“very likely a nuclear reactor,” similar to that at Yongbyon in North Korea, that should have been declared by Syria pursuant to its CSA and Code 3.1 of the General Part of the Subsidiary Arrangements.²⁸⁶ The report noted that the features of the destroyed building were comparable to those of gas cooled graphite moderated reactors of the alleged type and size; configuration of the infrastructure at the site was “not consistent” with Syria’s claims regarding its purpose; and other features of the site were suitable for a reactor. Moreover, analysis of samples from the site indicated a connection to nuclear-related activities. Finally, the Agency concluded that features of the destroyed building could not have served the purpose claimed by Syria (missile production). A photograph provided by a member state had “corroborated the allegation that Syria attempted to conceal the features of the building’s configuration.” Concealment efforts after the bombing were also confirmed from satellite imagery provided by a member state. The report included a diagram showing the assessed configuration of the site before and after the bombing, including replacement buildings and the removal of piping. The Agency assessed that the site had many of the standard requirements for reactor siting, including cooling water (from the Euphrates River), electricity, and low seismicity.²⁸⁷

On the MNSR issues, the report noted that Syria had finally permitted an Agency visit to Homs in April 2011. The Agency concluded that Syria’s statements concerning those issues “were not inconsistent with the Agency’s findings” and that the matter would in future “be addressed in the routine implementation of safeguards” (the implication being that the Agency would keep an eye on the situation).

The Director General noted that the circumstances relating to the alleged reactor were unique in that the building had been destroyed, debris removed, several years had passed, and the state concerned had not provided the necessary cooperation required by the Agency.²⁸⁸ Still his report did not use the word “non-compliance” or any synonym like violation or breach—even though there had been several instances of non-compliance, including Syria’s persistent non-cooperation with the Agency.

²⁸⁶ GOV/2011/30, p. 7.

²⁸⁷ The Syria case is a good example of the Secretariat dealing with in-house contestation over a non-compliance finding. An experienced Egyptian safeguards inspector, Dr Yousry Abushady, a safeguards operation section head but not of the section that handled Syria, contested the Agency’s conclusion that a nuclear reactor had been under construction. Based on his experience in designing such heavy water reactors he claimed it was “impossible.” See “Interview of the Nuclear Expert Dr. Yousry Abushady” By Dr. Abdelmonem Saeed on Egyptian TV channel 1, August 21 2009 (<https://www.youtube.com/watch?v=Na2Ar2ocq0E> (accessed September 30, 2015)). His credibility was cast in doubt during the interview, however, when he claimed that Egypt had been badly treated by the IAEA in its investigation of Egypt’s possible non-compliance in 2007-8, apparently because the particle sampling was not done competently by the international network of laboratories that the Agency uses. Despite the fact that Syria was not his responsibility he was, according to Agency sources, given a full hearing by the Safeguards Department, but his misgivings were overruled. He says he resigned in protest (conversation with the author, New York, April 28, 2015).

²⁸⁸ GOV/2011/30, p. 6.

Syria Declared in Non-Compliance

Nonetheless on June 9, 2011 the Board, responding to the Director General's damning report, no matter how diplomatically worded it had been, adopted a resolution which found that Syria's undeclared construction of a nuclear reactor at Dair Alzour and failure to provide design information for the facility constituted "non-compliance by Syria with its obligations under its NPT Safeguards Agreement with the Agency in the context of Article XII.C. of the Agency's Statute."²⁸⁹ The Board called on Syria to "remedy urgently its non-compliance" and provide the Agency with updated reporting and access to all information, sites, material, and persons necessary. The Board decided to report Syria, as provided in Article XII.C of the Statute, to all members of the Agency, to the Security Council, and to the General Assembly. Only 17 voted in favor of the resolution,²⁹⁰ while six were opposed (Azerbaijan, China, Ecuador, Pakistan, Russia and Venezuela), 11 abstained²⁹¹ and the Governor from Mongolia was absent. This was the most divisive vote on a non-compliance issue in the IAEA's history, providing further evidence of the disappearance of the "Spirit of Vienna" and, for some, the growing "politicization" of the Board. In a statement before the vote Russia said that although Syria might have engaged in some wrongdoing, the issue was not one that the Council needed to address since "the site at Dair Alzour no longer exists and therefore poses no threat to international peace and security."²⁹² Preoccupied with the more pressing issue of seeking to end the Syrian civil war and dealing with its regional impacts, the Security Council has so far failed to act on Syria's nuclear non-compliance.

There has been some discussion about whether the Syria case has set new precedents in finding a state in non-compliance.²⁹³ The finding was not based on diversion of material to a weapons program, a failure to declare nuclear material, or a failure to cooperate with the Agency, with reference to Article 18 of Syria's CSA. Nor was it based on "constructive" or inferred non-compliance, where the Agency is "not able to verify that there has been no diversion of nuclear material required to be safeguarded," with reference to Article 19 of the CSA. Rather it was based on the failure to declare a facility that was "very likely a nuclear reactor" under Articles 41 and 42 and Code 3.1 requiring the provision of design information well in advance of a reactor's construction.

289 IAEA Board of Governors resolution GOV/2011/41, June 9, 2011. See IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report of the Director General*, GOV/2012/42, (Vienna: IAEA, August 20, 2012), p. 3.

290 The authors of the draft (Australia, Belgium, Canada, Czech Republic, Denmark, France, Germany, Italy, the Netherlands, Portugal, South Korea, the United Kingdom, and the United States) as well as Singapore, Cameroon, the United Arab Emirates, and Japan.

291 Argentina, Brazil, Chile, India, Jordan, Kenya, Niger, Peru, South Africa, Tunisia, and Ukraine.

292 Quoted in Peter Crail, "IAEA sends Syria case to UN," *Arms Control Today*, July 7, 2011, https://www.armscontrol.org/act/2011_%2007-08/%20IAEA_Sends_Syria_Nuclear_Case_to_UN (accessed September 30, 2015).

293 Drawn to my attention by Vilmos Cserveny, former IAEA official, July 2015.

According to Peter Crail of *Arms Control Today* former U.S. and IAEA officials claim that the Board's decision to act on the Agency's "best assessment" rather than definitive proof of noncompliance was new territory for the IAEA.²⁹⁴ Mark Fitzpatrick of the International Institute of Strategic Studies in London was reported as saying that the IAEA's "willingness and ability to draw reasonable conclusions in the Dair al Zour case despite Syria's refusal to cooperate with the investigation set an important precedent." Former IAEA Deputy Director-General for Safeguards Bruno Pellaud said that the decision is "a new tool for the IAEA," but cautioned that it was not as strong as a referral based on a clear noncompliance determination. He had supported the Agency requesting a special inspection of the Syrians first, arguing that "a refusal of a special inspection would have lent much more substance to the referral" to the Security Council.

Since being found in non-compliance, Syria has repeatedly refused further IAEA access to the Dair Alzour site. The outbreak of civil war in the country has rendered such a visit more difficult and increasingly unlikely.²⁹⁵ The Syrian government has used the deteriorating security situation as a reason to delay responding to the Agency's requests. However the Agency itself has also realized the challenges involved in obtaining on-site access, especially as the area, located in eastern Syria, is currently under the control of the so-called Islamic State. In June 2013 the Agency felt obliged to tell the Syrians that the UN Department of Safety and Security (UNDSS), after considering the security conditions in Syria and the small amount of nuclear material at issue, had advised that a physical inventory verification (PIV) visit to the MNSR should be postponed. Cynically, in 2014 the Syrians, knowing that the UNDSS assessment had not changed, indicated their readiness to receive inspectors to perform the PIV.²⁹⁶

Since 2011 the reports on Syria have dwindled to one a year and shrunk to three pages each, essentially summarizing what has already been reported. The non-compliance case remains unresolved, tangled in the miasma of Syria's continuing dismemberment and the deteriorating relationship between Russia, Syria's ally, and the West. In September 2014 Russia failed in a bid to have the Board of Governors remove Syria from its agenda.²⁹⁷ The same states that voted in favor of reporting Syria to the Security Council voted against the Russian resolution, while China supported it.

294 Crail, "IAEA sends Syria Case to UN." All quotations in this paragraph reported by Crail.

295 In an earlier phase of the conflict, in 2014, a combined UN and OPCW mission managed to conduct verification and removal activities in respect of Syrian chemical weapons, but at the time of writing the OPCW is reluctant, for security reasons, to venture into Syria again.

296 IAEA, *Implementation of the NPT Safeguards Agreement with the Syrian Arab Republic: Report by the Director General*, GOV/2014/44, (Vienna: IAEA, September 3, 2014), p. 3.

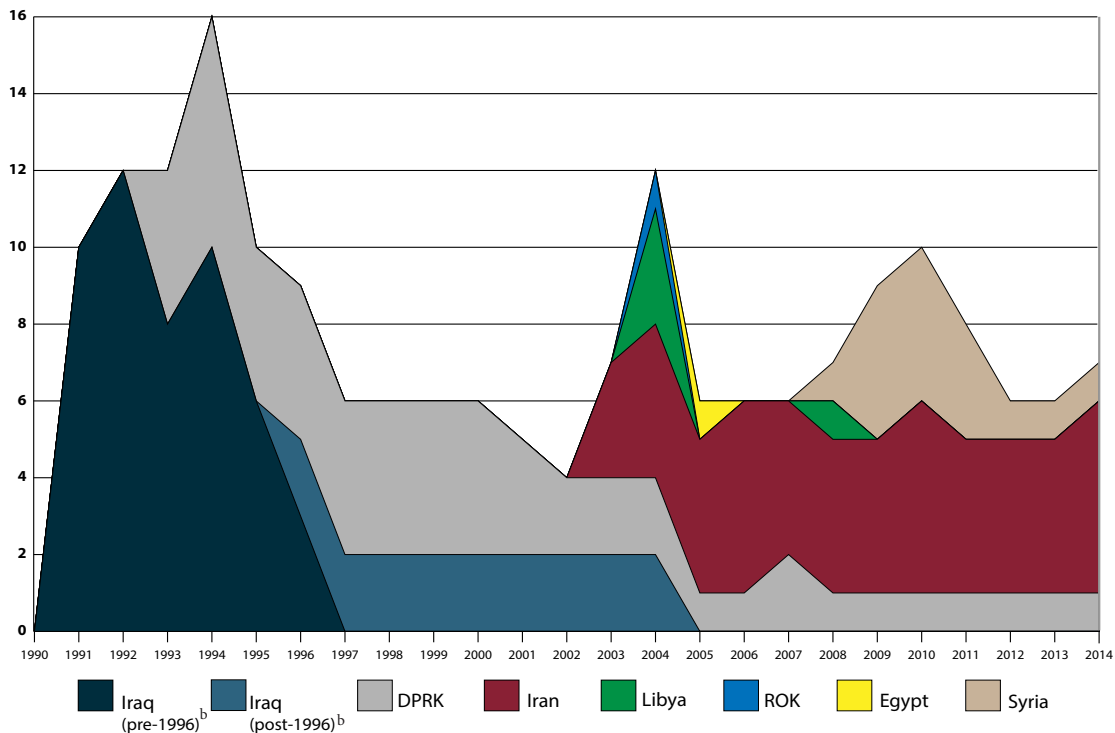
297 Fredrick Dahl, "Russia fails in bid to remove Syria probe from IAEA Agenda," *Reuters*, September 19, 2014, <http://www.reuters.com/article/2014/09/19/us-syria-nuclear-iaea-idUSKBN0HE18C20140919> (accessed September 30, 2015).

PART 3: NON-COMPLIANCE REPORTING: TRENDS AND CONTROVERSIES

Number, Volume, and Complexity

Although subject to some fluctuations, the overall trend over time has been an increase in the number, volume and complexity of non-compliance reports by the Secretariat. This has occurred partly because unresolved cases have begun to overlap rather than each one being tidily dealt with before the next one arises. Currently, for example, the Secretariat reports on three cases—Iran, North Korea, and Syria—none of which is likely to be resolved soon. While in some of the long-running cases there is often little new to report in each successive document, permitting much detail to be simply replicated (“cut and pasted”) each time, there are often changes, subtle or otherwise, that need to be incorporated. Even in the case of North Korea, to which the Agency has not had on-site access since 2009, new information has come to light from non-Agency sources that needs to be incorporated.

Figure 2: State-Specific Written Non-Compliance Reports, 1990–2014^a



Source: see Table 1

^aRomania report was oral only.

^bNon-compliance reporting was regularized in 1996.

At the beginning of the Iraq case the Agency, being new to the whole reporting process, issued reports to the Security Council after each round of inspections. It soon realized that consolidated reports were more useful and less taxing to both the Agency and to its “customers.” Since then the pattern has been to issue reports to the Board either on a quarterly or annual basis or special ones on request. The Secretariat has also sought in several long-running cases to produce consolidated reports listing all issues, both resolved and unresolved, and containing summary charts and annexes. This is invaluable for keeping member states, especially those without their own technical expertise, abreast of the issues. It also provides an opportunity for the Agency to recap for outside observers the verification work it has done and is continuing to do on the case, as a reminder of how difficult the resolution of non-compliance issues can be. It also puts the state concerned on notice that the Agency has not forgotten outstanding issues that require resolution, no matter how apparently minor. Iran and its allies have suggested in the past that the lack of a report on a particular issue meant the Agency was satisfied with the Iranian response. Syria and its allies have suggested that there is no longer a case to be answered since the alleged reactor no longer exists, notwithstanding the Secretariat’s continuing attempts to discover the truth. Chronologies of cases are also useful inclusions in reports on complicated cases. However, for extremely long-running sagas like that of Iran it is impractical to include the entire detailed chronology. In that case the chronologies on the IAEA website are invaluable. However, they should contain information on the substantive issue at each point, rather than simply “the Director General addressed the Board” or “he had a particularly busy schedule of meetings.”

As the case studies demonstrate, contrary to the simple, linear, and tidy non-compliance process envisaged in the IAEA Statute, the process often turns out to be complex, non-linear, and messy. Linearity in particular is often missing. Instead of a single non-compliance issue being reported to the Board, as implied by the simple schema outlined in the Statute, there are often multiple issues to be dealt with. This is most evident in a long-running case like that of Iran, but has occurred even in a case like that of South Korea and Egypt, where revelations about one issue soon led to information about other issues being revealed. In some cases, just as a resolution of the non-compliance case appeared within view, new issues arose to complicate the picture. This occurred most dramatically in the Iran case in 2011 with allegations about PMD, but also in the Syria case, which was originally focused on the destruction of the alleged reactor. A third complicating factor, not envisaged in the Statute, is that several non-compliance cases may be linked. The most infamous example of this is the assistance given by the A.Q. Khan network to Libya, Iran, and North Korea.

Complexity is also introduced by the number of “masters” or “customers” that the Secretariat acquires over the lifetime of a case. In addition to the Security Council, which is to be expected, there have also been several ad hoc arrangements or agreements that have tasked the Agency, namely in the Iraq, Iran, Libya, and North Korea cases. The comprehensive deal on Iran will add weighty new responsibilities to the Agency’s verification and compliance reporting tasks.

Given these trends and the absence of clear guidance in the Statute or in safeguards agreements, the Agency has had to be flexible, nimble, and creative in the way it handles and reports on non-compliance cases. Since each case has been *sui generis*, the Agency has had to craft a tailor-made approach each time. As a result the Agency has built up a corpus of precedent and experience that it can draw on each time a new case arises, but there is no exact template that, at least so far, can be applied.

The Issue of Confidentiality

An issue that has arisen periodically, but particularly in the Iran case and the PMD allegations, is whether the Secretariat engages in withholding or “hiding” information relevant to non-compliance that should be included in its reports. Clearly, the Agency cannot release all information that comes its way. Apart from the statutory requirement for “safeguards confidentiality” of information obtained through its verification processes, information is also provided voluntarily by member states, often from intelligence agencies. Sometimes the information will be provided only on the understanding that it not be released publicly or to member states. States are wary that the release of intelligence information may compromise the sources from which it has been obtained. In the case of human sources this can endanger lives. In other instances secret technical capabilities will be revealed.

The Secretariat stands to benefit enormously from intelligence information, but must be extremely careful in its use. It understandably wants to be able to make the most convincing non-compliance case it can, using all available evidence. On the other hand the accused state will, quite rightly, be concerned to receive as much information as possible about the case against it in order to be able to rebut it. Yet the Secretariat cannot assume the veracity of all intelligence-based information and must be wary of states’ motives in providing it. From a reporting perspective, the Secretariat should only release what it is reasonably confident is credible and even then should add the appropriate caveats, as it began doing in the Iran case. Its use of standard caveats to characterize

its assessment of the credibility of information should be encouraged and further elaborated.²⁹⁸

Format and Style

The format and style of the Director General's non-compliance reports was established by the Iraq case and now follows a standard pattern. At the outset the reports identify the resolutions, agreements, or other relevant documentation on the case. This is followed by various sections on the details of the case and any updates. The documents end with conclusions, recommendations, or future steps. There has been a trend towards attaching annexes, lists of relevant declared facilities, and even maps and diagrams.

The way the substance of the case is arranged within the document varies greatly, depending on the history and trajectory of the case. Often there are separate sections for the state's compliance with its CSA, on the one hand, and with the special requirements of a Board and/or Security Council resolution on the other. While the layout is usually clear, the change of title that reports sometimes acquire, often for no discernable reason, is confusing. Sometimes this results in ungainly titles listing, for instance, successive Security Council resolutions. The Secretariat should regularize this practice with simple titles identifying the country concerned. It behooves the Agency to make its documentation as accessible as possible to all delegations, including the small delegations that have no technical expertise or advisors either in Vienna or in capitals to assist them, but which may be elected to the Board and thus be required to make informed non-compliance judgments. This is also important if non-compliance cases are to be understood by the membership and the general public.

While an obvious recommendation would be for the Secretariat to standardize the terms it uses in non-compliance reports—such as “breach,” “serious concern,” “failure to comply,” and “failure to ... (for example report)” —it would seem that the cases, circumstances, and relevant evidence are so different that this would be a pointless exercise. Better to leave the Secretariat with the flexibility to deal with each case as it chooses. The most important requirement is that it makes comprehensible and balanced assessments that signal to the Board the case as it is known to the Secretariat, based on the verifiable facts available to it.

²⁹⁸ See “Credibility of information” section of IAEA, *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran: Report by the Director General*, GOV/2011/65, (Vienna: IAEA, November 8, 2011), Annex, pp. 3–4.

Involvement of the Director General in Report Writing

One of the controversial issues over the years has been the extent to which the Director General should review or, more pejoratively “second guess,” the findings of safeguards experts, either by rejecting their findings of non-compliance and declining to bring a case to the Board or by inappropriately “editing” non-compliance reports to the Board. In contention is the extent to which “extraneous” considerations, variously characterized as non-technical, legalistic, or political, should be injected into considering a non-compliance case, the drafting of a report, and in the decision to forward it to the Board.

Some of the concern arises from the fact that of the five directors general to date only one, Sigvard Eklund (1961–1981), has been a nuclear scientist. Most have been lawyers. None has been a safeguards expert. Much, it turns out, depends on the personality, inclinations, and work habits of the Director General. By one account Hans Blix did not “interfere” in the drafting of non-compliance reports since he consulted widely in advance with safeguards personnel, the Board, and member states. By the time the report came to him he had no need to “massage” it.²⁹⁹ He also only had a small team of five advisors to review Secretariat submissions across the range of Agency issues.³⁰⁰

ElBaradei, in contrast, reportedly “inserted himself” regularly into the drafting process on the grounds that a non-compliance case is not just a technical issue but needs to be put into a wider context. He took the report finalization process into his office, obliging the Safeguards Department to send him early drafts in order to “massage” the language.³⁰¹ The number of advisors in his office doubled to ten.³⁰² The Office of External Relations and Policy Coordination was also involved, a source of some discontent among some member states.³⁰³ According to Tariq Rauf, ElBaradei never substantially altered reports to the Board, but did, appropriately, question safeguards recommendations and ask the Department to justify them. Sometimes he suggested that taking the matter to the Board be postponed until the situation was clearer.³⁰⁴ Olli Heinonen contends that unfortunately this approach gave the “guilty party” time to fix the problem

299 Interview with John Carlson, Harvard, June 5, 2014.

300 Interview with Olli Heinonen, Harvard, June 5, 2015

301 According to one account, there was considerable disagreement between ElBaradei and DDG Pierre Goldschmidt, whom ElBaradei saw as a “technical boffin” with no political nous. ElBaradei didn’t try to work with him and there was essentially “war” between the department and the Director General.

302 Interview with Olli Heinonen, Harvard, June 5, 2015.

303 See <http://www.wikileaks-forum.com/cablegate/7/wikileaks-cables-preparing-for-syria-at-march-iaea-board-of-governors-meeting/17137/5/wap2> (accessed September 23, 2015).

304 Interview with Tariq Rauf, Vienna, June 23, 2014. Bolton claims that in September 2003, after IAEA inspectors discovered that the Iranians had repainted and retiled several rooms at the Kalaye electric facility just before they arrived, the “ever unhelpful elBaradei [sic] heavily edited the draft report prepared by the IAEA staff, deleting many revealing details” (Bolton, p. 140). In fact Bolton himself reports (p. 141) that ElBaradei did reveal some of what IAEA inspectors had found in his September 2003 report to the Board, which appears to nullify Bolton’s accusation.

before further inspections could be done.³⁰⁵ Both Heinonen and John Carlson report that IAEA inspectors detected early signals about possible non-compliance by Iran, but ElBaradei did not consider them serious or convincing enough to characterize as non-compliance and warrant reporting to the Board. Heinonen claims there were suspicions about South Korea's safeguards violations at least a decade before they were acted on.³⁰⁶ Other former safeguards personnel dispute this contention.³⁰⁷

The current Director Yukiya Amano has continued the practice of close involvement in report crafting. After abolishing EXPO soon after assuming office (reportedly on the grounds that its staff were too close to ElBaradei) he expanded his executive office considerably (the list of personnel extends to over a page in the Agency's directory). His advisors (Heinonen calls them "mandarins") are involved in overseeing the work of the Agency's departments generally, as well as involving themselves in report drafting.³⁰⁸ Amano is reportedly less concerned with fine-tuning reports overall than with ensuring that he is comfortable with the conclusions. It is, after all, he who has to convincingly deliver them to the Board. While he does ask questions to clarify his understanding of technical issues he does not, apparently, seek to alter such details.³⁰⁹

Accusations of "political" massaging of non-compliance reports may indicate a clash of cultures that is common in technical organizations. Technical personnel often believe that only technical considerations should inform reports, that the "facts" should be allowed to speak for themselves and that the political "chips" should be allowed to fall where they may. Managers on the other hand are obliged to take into account the interests of an organization as a whole (in this case not just the inspectors and the Department of Safeguards), the will of the board of directors (the Board of Governors), the desires of the "shareholders" (the 165 member states), and, last but not least, the budget.

The growth in the size and power of executive offices is not confined to the IAEA and other international organizations but is a feature of modern government generally, reflecting the mounting complexity of management, the speed of change (not least the 24-hour news cycle),

305 Carlson cites the case of South Korea. After it had signed an AP inspectors asked for access to a particular laboratory, but were refused on the grounds that the AP had not yet been ratified. The inspectors were told to come back in a year, by which time any evidence of non-compliance could have been erased. While the position taken by South Korean officials was legally (or legalistically) defensible, it looked suspicious (interview with John Carlson, Harvard, June 5, 2014).

306 Interview with Olli Heinonen, Harvard, June 5, 2015.

307 Private conversations with former IAEA officials, July 2015.

308 The DG's *Chef de Cabinet*, Rafael Grossi, reportedly also accompanied the DDG for Safeguards to meetings with Iranian and Syrian representatives to discuss non-compliance issues, allegedly to keep watch on them, the first time this had ever happened. It is not clear if this practice continues.

309 According to off the record discussions with Secretariat officials, Vienna, June 2015.

and the interconnectedness of global issues.³¹⁰ Such a trend does not necessarily indicate a propensity to inappropriately micromanage lower levels, but it does provide the opportunity to do so. Ultimately, it does not matter where advisory personnel are located, whether in the main body of the Secretariat or in an executive office, so long as expert and judicious advice is given in the crafting of non-compliance reports.

Defining Non-Compliance—When Should the Secretariat Report?

Article XII.C of the IAEA Statute implies that any non-compliance discovered by the Secretariat (“the inspectors”) is automatically reported to the Director General, who “shall thereupon transmit the report to the Board of Governors.”³¹¹ In practice, as we have seen, this is unworkable. Many cases will be too minor to bother the Director General and/or the Board with and may be perfectly resolvable without their involvement. Fischer and Szasz concur:³¹²

Though the Statute itself provides no threshold for the seriousness of the non-compliance, in effect minor offenses (e.g. a short delay or an unintentional mistake in a report) are likely to be screened out by the inspectors or the Director General on the basis of a general, informal understanding that trivial deviations that do not appear to constitute part of a scheme for diverting nuclear materials should be resolved informally and without resort to the Board.

But this still begs the question of how the Secretariat is to determine when to report non-compliance (including when to use the term “non-compliance”). Precisely when is a report of non-compliance to the Board warranted and what criteria should be used to make a judgment that non-compliance has occurred or has likely occurred? How many minor incidents are permitted until a case of non-compliance is established? What is trivial and what is serious?

Although there is no definition of non-compliance approved by member states to guide them, the Secretariat has for its own purposes defined infractions of safeguards in a way that is surprisingly broad and gives it great flexibility. At the lowest levels of infraction the Secretariat uses the terms “discrepancy” and “anomaly.”

310 The Australian, Canadian, and British Westminster systems have witnessed a significant expansion of Prime Ministerial offices, favoring a more Presidential style of government, while the White House staff has itself expanded exponentially in recent decades.

311 IAEA Statute, Article XII.C.

312 David Fischer and Paul Szasz, *Safeguarding the Atom: A Critical Appraisal* (London: Taylor & Francis, 1985), p. 138.

IAEA Definitions of Discrepancy and Anomaly

Discrepancy—an inconsistency found in the facility operator’s records, or between facility records and State reports or between these records and inspector observations or indications resulting from containment and surveillance measures. Discrepancies that cannot be resolved (i.e. ascribed to innocent causes or otherwise satisfactorily explained) may lead to the determination that declared nuclear material is unaccountably missing. A discrepancy involving 1 Significant Quantity [SQ] or more of nuclear material is classified as an anomaly.

Anomaly—an unusual or observable condition which might result from diversion of nuclear material or misuse of safeguards items, or which frustrates or restricts the ability of the IAEA to draw the conclusion that diversion or misuse has not occurred. Examples of possible anomalies would be:

- Denial or restriction of IAEA inspector access for inspection
- Unreported safeguards significant changes to facility design or operating conditions
- A discrepancy involving 1 SQ or more of nuclear material
- A significant departure from the agreed recording and reporting system
- Failure of the facility operator to comply with agreed measurement standards or sampling methods
- (For bulk handling facilities) a negative conclusion resulting from the evaluation of MUF (material unaccounted for), SRD (shipper/receiver difference) or other statistics
- IAEA seals on equipment detached by non-IAEA staff, lost or showing signs of tampering
- Evidence of tampering with IAEA equipment.

Source: IAEA, IAEA Safeguards Glossary, 2001 Edition, (Vienna: IAEA, 2001), p. 26.

These definitions indicate the way the Secretariat views the granular aspects of non-compliance. The Secretariat is careful to say that the definitions “have no legal status” and “are not intended for adjudicating definitional problems,” such as might arise in negotiating or interpreting safeguards agreements.³¹³ Nevertheless its use of the defined terms “anomaly” and “discrepancy” suggests that it does not consider these to amount to reportable non-compliance—even though in a literal sense they are. But the question still remains where to draw the line.

The definitions hint at the growing complexity. The steady increase in the number of states with safeguards agreements provides multiple opportunities for minor, inadvertent breaches, whether technical or procedural. It is notable (and sensible) that the Secretariat does not use

³¹³ Foreword, IAEA, IAEA Safeguards Glossary.

these terms, in order not to trivialize any particular case—even a minor breach may be symptomatic of a much larger non-compliance problem.

The IAEA legal office's interpretation of CSAs also sets the non-compliance bar quite low, giving the Agency a great deal of flexibility in determining what it is. It points to paragraph 28 of INFCIRC/153 which describes the objective of safeguards as “the timely detection of diversion of significant quantities of material from peaceful nuclear activities to the manufacture of nuclear weapons or other nuclear explosive devices *or for purposes unknown* [emphasis added], and deterrence of such diversion by the risk of early detection.” The Secretariat argues that it does not need to determine that a state is diverting material to nuclear explosive devices, but just that the material cannot be accounted for.

“Significant quantities” were defined by the Agency in the late 1970s,³¹⁴ agreed by the Board on a “provisional basis” and have not been changed since.³¹⁵ While they have been considered too high by some observers,³¹⁶ the Secretariat argues that they need to be seen in the context of the overall detection goals, which seek to define “timely detection” for different types of nuclear material (expressed in months and years) and “risk of early detection.” The Secretariat emphasizes that the detection goals are not rigid requirements, but rather criteria for planning inspections, providing a quantitative basis for judging progress in safeguards effectiveness, and a guide for safeguards research and development efforts.³¹⁷

In practice, a blatant safeguards violation that should immediately be reported to the Board of Governors as non-compliance is likely to be easily detectable—but is also the least likely scenario. The most likely scenario, as the cases so far indicate, involves ambiguous signals or evidence giving rise to suspicions but no “proof,” much less the infamous “smoking gun.” Inevitably, in these cases the Secretariat will be required to exercise judgment as to the meaning of the evidence and how it should be followed up. The most difficult cases will thus not be the obviously trivial, “technical” ones or those that are patently serious, but those in between. Part of the judgment that the Secretariat needs to make is whether to report a case as “non-compliance” or as one requiring a different label, such as “breach” or “a matter of serious concern.”

314 See Table II, “Significant Quantities,” IAEA, *IAEA Safeguards Glossary*, p. 23.

315 See Lawrence Scheinman, *The International Atomic Energy Agency and World Nuclear Order* (Washington, D.C.: Resources for the Future, 1987), p. 166.

316 See for example Thomas B. Cochran, “Adequacy of IAEA’s safeguards for achieving timely detection” in Henry D. Sokolski (ed.), *Falling Behind: International Scrutiny of the Peaceful Atom* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2008).

317 Scheinman, pp. 166–167.

A Determination of Non-Compliance and Use of the Term

The question of when the Secretariat should make a determination that non-compliance has occurred has become inextricably linked to the question of when it should use the word “non-compliance.” Both questions have been in turn linked to the question of when the Board of Governors should make such a determination and use the term. These strands are difficult to disentangle, since there is a symbiotic relationship between, on the one hand, the Secretariat’s findings on non-compliance and how it characterizes them, including the language used, and, on the other, the Board’s decisions on whether non-compliance has in fact occurred and its use of language. There are both substantive and semantic issues involved.

Table 2: Use of the Term “Non-Compliance” and Outcomes

Case	Term used in Director General’s reports	Term used by Board	Response by Board	Report by Board to Security Council
Iraq (1992–2005)	non-compliance	non-compliance	resolution	n/a ^a
Romania (1992)	non-compliance ^b	non-compliance	Chair’s statement	yes (information only)
DPRK (1992–present)	non-compliance	non-compliance	resolution	yes
Iran (2002–present)	breach	non-compliance	resolution	yes
Libya (2003–2008)	breach	non-compliance	resolution	yes (information only)
ROK (2004)	failures to report; serious concern	used DG’s terms	Chair’s statement	no
Egypt (2004–2005)	repeated failures; matter of concern	used DG’s terms	Chair’s statement	no
Syria (2008–present)	none [†]	non-compliance	resolution	yes

^a not applicable, as the Council was already “seized” of the case when the Board found Iraq in non-compliance

^b Director General Hans Blix is reported to have used the term in his oral report to the Board

[†] apart from expressions of regret at Syria’s lack of cooperation and the Agency’s inability to carry out the necessary verification work, the closest the DG came was: “the Agency concludes that the destroyed building was very likely a nuclear reactor and should have been declared by Syria pursuant to Articles 42 and 45 of its Safeguards Agreement and Code 3.1 of the General Part of the Subsidiary Arrangements thereto” (GOV/2011/30, para. 24).

As mentioned in the Iran case study, it was only in 2003 that the term “non-compliance” suddenly became politically potent. Not wishing to be drawn into controversy the Secretariat concluded, on legal advice, that the Director General was not obliged to use the term in reporting a safeguards breach to the Board. Nor was the Board itself obliged to use the term. The Secretariat accepted the advice and, as we have seen, used alternatives in the Iran case. Since then the Secretariat has avoided using the term, unlike the Board, which has been more willing to use it.

Secretariat Considerations

Prior to the Iran case there appeared to be a widespread presumption, including in the Secretariat, that if the Director General reported non-compliant activity or suspicions to the Board he was required to characterize it as such and use the word “non-compliance.” This may have arisen from the fact that the word was used in the most serious cases before then—namely Iraq and North Korea—and had reportedly been used in the oral report by the Director General in the Romania case. Precedent had apparently been established.

In fact nowhere in the Statute or in safeguards agreements is the Director General obliged to use the word. As we have seen, Article XII.C of the Statute provides for the “inspectors” to report any non-compliance to the Board but does not say that it has to be characterized as non-compliance or that the word should be used. INFCIRC/153 agreements do not even use the word non-compliance, much less oblige the Director General to use it. Paragraph 19 provides simply that the Director General *may* [emphasis added] report “relevant information” to the Board.³¹⁸ This implies that the Director General has great latitude in deciding the seriousness of a non-compliance case, whether to report it to the Board, and what terminology to use. Quite apart from the somewhat esoteric legal debate, there are several practical reasons why the Director General, even if he concludes that there is a serious non-compliance case to answer, may not wish to label it as “non-compliance.”

First, he may believe that while the matter is worth reporting, the evidence is still not compelling enough to accuse a state outright of non-compliance. The credibility of the verification system risks being undermined by allegations that cannot withstand rebuttal by the accused state or by Board examination. It would be especially damaging to the Secretariat to report that a state was in non-compliance, only for the Board to decline to support such a finding. From the Secretariat’s point of view it is much safer to simply report the facts along with its suspicions of a serious breach and let the Board make the non-compliance judgment—and decide whether to use the term.

³¹⁸ INFCIRC/153 (corrected), Articles 18 and 19.

Second, the Director General may believe that simply reporting the matter to the Board, without using the term non-compliance, may be sufficient to induce the state to cooperate with the Secretariat in resolving the issue and swiftly return to compliance. In the case of Egypt in 2007 the mere threat of a report to the Board seemed to have induced it to seek a quick return to compliance. The suspected state may in fact already be offering reassurances of its innocence and willingness to cooperate with the Agency in resolving the issue. It could also be pleading for more time. The danger, though, is that the state is procrastinating, seeking to hide or destroy evidence of its non-compliance, or hoping that the Agency may not have the will to pursue the matter further. This is how Iran and Syria have played their hands. In this case the Secretariat and Director General need to make a judgment call based on the evidence they have and presumably their intuition.³¹⁹ In the North Korea case, as we have seen, this proved prescient.

Third, the Director General may feel that if he does use the word non-compliance the Board will be under pressure to concur in that finding, particularly if the matter becomes public, resulting in automatic “referral” to the Security Council. Once a case is reported to the Council all sorts of political considerations enter the picture and life for the IAEA invariably becomes more complicated. The Board and the Council will demand more reports and intensified verification activity by the Secretariat, often without allocating additional resources. The Director General thus has an organizational incentive to maintain “ownership” of the issue by delaying a report by the Board that expressly uses the term. On the other hand the Secretariat will be under pressure not to under report and downplay the significance of non-compliance evidence. This is an especially telling consideration since the Secretariat’s track record is not good: it failed to detect by itself all of the major non-compliance cases so far except that of North Korea (although it did detect the relatively minor ones involving Egypt and South Korea). Having now decided that using the term “non-compliance” is a “political hot potato” it may be difficult for the Secretariat to return to using it, except in the most egregious and obvious cases where all parties agree that it has occurred.

Board of Governors Considerations

For the Board of Governors the considerations seem somewhat different. The Statute appears to require the Board to automatically report a case of non-compliance once it has made a determination that non-compliance has occurred. According to Article XII.C the Board “shall report the non-compliance to all member states and to the Security Council and General Assembly of the United Nations.”³²⁰ The use of the word “shall” in legal terms signifies that once a finding of non-compliance is made by the Board it has no choice but to report as required.

³¹⁹ Although beyond the scope of this study, for insight into decision-making in conditions of uncertainty see Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Strauss and Giroux, 2013).

³²⁰ IAEA Statute, Article XII.C.

Safeguards agreements, however, give the Board considerable discretion in handling a suspected or actual non-compliance case, or even concerns about compliance. Section 18 of INFCIRC/66 agreements, as already noted, provides only that any non-compliance *may* be reported to the Security Council.³²¹ CSAs do not use the word “non-compliance,” nor do they mention the Board making a “determination” or even the necessity of “reports.” Under paragraph 18, acting on a report from the Director General, the Board may decide that a situation is so “essential and urgent” that it may call on the state concerned to take action without delay to rectify the situation—without a mandatory report to the Security Council. As Michael Rosenthal points out, this step “indicates heightened concern but not necessarily that the state is in non-compliance.”³²² The article is indeed interpreted by the Secretariat as giving the Board powers to demand measures relating to non-compliance even before a non-compliance report is sent to the Security Council.³²³ This is what occurred in the Iran case.

Under Article 19 of CSAs the Board has further options, none of them mandatory. The Board may decide to report to the Council (or it may not) if the Agency is unable to verify that there has been no diversion of nuclear material. Moreover it may act merely on “relevant information” provided by the Director General, not necessarily a non-compliance report. As Rosenthal puts it, “the Board can act if the IAEA’s verification efforts are stymied. It does not need to draw a ‘guilty’ verdict.”³²⁴ This is all to the Board’s advantage (and the Secretariat’s) in preserving its flexibility to deal with the offending state and to decide if and when to report a case to the Security Council.

The legal question turns on the relationship between the Statute and safeguards agreements. Fischer and Szasz note that CSAs appear to make a non-compliance report to the Security Council “facultative,” that is dependent on the Board’s evaluation of “the degree of assurance provided by the safeguards measures that have been applied” and “any reassurance furnished by the state concerned.”³²⁵ The Secretariat cites the negotiating records of Committee 22, the open-ended committee of the Board that drafted INFCIRC/153, the basis of all CSAs, to support this conclusion. It says the records reflect the intention of the negotiators to preserve the Agency’s rights under Article XII.C of the Statute while granting it “greater flexibility in the conclusions it may reach and the consequences thereof.”³²⁶

321 IAEA, *The Agency’s Safeguards System* (1965, as provisionally extended in 1966 and 1968), INFCIRC/66/Rev.2, September 16, 1968, Article 18.

322 Michael D. Rosenthal et al, *Detering Nuclear Proliferation: The Importance of IAEA Safeguards*, Brookhaven National Laboratory, April 2013, p. 81, <http://www0.bnl.gov/NNS/IAEAtextbook.php> (accessed September 30, 2015).

323 Rosenthal *et al*, p. 82. Rosenthal also notes that the Board may demand such action of a state regardless of whether the arbitration procedures provided in the state’s CSA have been invoked: “To do otherwise would permit states to use the lengthy dispute resolution process to avoid taking action.” This may be relevant to the comprehensive Iran deal concluded in July 2015, which contains a dispute resolution mechanism in the form of a Joint Commission.

324 Rosenthal et al, p. 82.

325 Fischer and Szasz, p. 138.

326 “Relationship between paragraph 19 of INFCIRC/153 and Article XII.C of the Statute of the Agency,” November 28, 2003 (unnumbered informal Secretariat note). David Fischer records that the Secretariat produced the original draft based on the existing INFCIRC/66/Rev.2 safeguards agreements, “but modified to take account of the requirements of the NPT as the Secretariat understood them” (Fischer, p. 254). A detailed study of the evolution of safeguards in a Norwegian PhD thesis does not mention the compliance issue at all (see Astrid Forland, “Negotiating Supranational Rules: The Genesis of the IAEA Safeguards System,” (PhD diss., University of Bergen, 1997). “Relationship between paragraph 19 of INFCIRC/153 and Article XII.C of the Statute of the Agency.”

Laura Rockwood, former legal advisor to the IAEA, argues that the basis of the safeguards relationship between the IAEA and a state party to a safeguards agreement is the agreement itself. Therefore it is the safeguards agreement, rather than the Statute, that is applicable in the Secretariat's decision about whether and how to report a safeguards breach and in how the Board of Governors acts. The IAEA Statute, she argues, is not "self-executing" in respect of safeguards but is dependent on the negotiation of agreements between the Agency and states.³²⁷ A telling point, Rockwood says, is that not all states with safeguards agreements are members of the Agency (even without the exceptional case of Taiwan), so their being reported to the Security Council for non-compliance cannot depend on the Statute. In addition, the Board's formulation of its request for such reports reflects divergent practices.

The counter argument is that the Statute binds the Agency (both the Board and the Secretariat) regardless of any agreement between the Agency and a state. Moreover CSAs, even those the IAEA has concluded with non-member states, specifically refer in Article 19 to the Statute's Article XII.C non-compliance provision, providing the link to the Agency's statutory non-compliance reporting role. John Carlson argues for splitting the difference:³²⁸

One way to understand the relationship between Article XII.C and paragraph 19 is to see the former as applying to unambiguous non-compliance, such as detection of diversion or refusal to allow inspections. The "inability to verify" formulation of paragraph 19 could also apply to some such situations but, in addition, could apply to circumstances that are less clear-cut where the IAEA's investigations are inconclusive.

It was the Iran case, as we have seen, that clarified the situation and established precedent. The IAEA's legal counsel concluded in November 2003 that the Board did not need to make a determination of non-compliance in order to act, nor by implication did the Secretariat or Director General need to report "non-compliance" in order for the Board to act.³²⁹ This would accommodate situations, the legal ruling concluded, where the Agency "may not be able to prove non-compliance, but where a suspicion remained, and the Agency was unable to verify that there had been no diversion of material required to be subject to safeguards."³³⁰

Hence, the Board could find that the Agency is "unable to verify that there has been no diversion" (the language used in CSAs), "either because there had in fact been diversion (non-compliance in its clearest sense), or because of any other action or omission by the State which prevents the Agency from being able to verify non-diversion (such as a denial of access or a failure to declare nuclear

327 The late David Fischer appears to have concurred: "... the Statute is not a self-enforcing document. The precise procedures that the IAEA would be required to follow and the directives it would be required to observe would have to be articulated in detailed safeguards documents and in agreements with the States concerned" (Fischer, p. 456).

328 John Carlson, "Defining non-compliance: NPT safeguards agreements," *Arms Control Association*, May 8, 2009, https://www.armscontrol.org/act/2009_5/Carlson (accessed September 23, 2015). Carlson describes the "non-self-executing" argument as a red herring.

329 The legal conclusion was not shared with the Board.

330 "Relationship between paragraph 19 of INFCIRC/153 and Article XII.C of the Statute of the Agency."

material or facilities).” The Board’s response may thus vary to suit the circumstances. It may make the reports mentioned in the Statute, or take the other measures provided for in CSAs. The conclusion of legal counsel was that “...reporting to the Security Council of a finding by the Board of Governors of non-compliance with a safeguards agreement is discretionary, and that discretion lies with the Board.”³³¹ The Board used this discretion to delay reporting Iran to the Security Council, despite having found it to be in non-compliance, and later declined to report Egypt and South Korea to the Council at all.

The Board should nonetheless be prepared to use it in the broadest possible way to signal its determination that the integrity of the safeguards system should be upheld. This does not mean that the Board should automatically report the case to the Council with the expectation that the Council take action. Rather, it should follow the precedent it has already established and report all such cases to the Council—at the very least for information purposes. This should be done not just when the non-compliance occurred long ago and has since been rectified, as in the Romania and Egypt cases, but when it is current and being rectified, as in the Libya case, and even in current cases where the non-compliance is not judged to be a threat to international peace and security but is still of concern. Even being reported to the Council “for information purposes” can be a powerful signal to states that the Board takes safeguards violations, no matter how apparently minor or inadvertent, seriously.

A related issue is the extent to which the Board of Governors should only issue “technical” assessments, while leaving the “political” judgment about non-compliance to the Security Council. The International Commission on Nuclear Non-proliferation and Disarmament (ICNND) in its 2009 report suggested that because a non-compliance finding “inevitably involves both technical and political dimensions”:³³²

It is important, if [its] credibility is to be maintained, that the IAEA confine itself essentially to technical criteria, applying them with consistency and credibility, and leaving the political consequences for the Security Council to determine.

This seems ill-judged. The Board of Governors is precisely the place where political judgments need to be made about the Secretariat’s reports on actual or alleged non-compliance. Governors and their delegations, even though they represent member states, are more familiar with safeguards issues than their counterparts in New York. Moreover, as we have seen, “kicking the issue upstairs” to the Security Council will not necessarily solve anything and usually results in the Agency being asked to undertake more verification work and reporting. The ICNND report also complained that the IAEA (without specifying whether it meant the Board or the Secretariat)

³³¹ “Relationship between paragraph 19 of INFCIRC/153 and Article XII.C of the Statute of the Agency.”

³³² ICNND, *Eliminating Nuclear Threats*, para. 9.15, p. 87.

had “not helped itself in practice by setting the bar higher than its own standard safeguards agreements, which provide, for example, that a state may be found in non-compliance if the Agency is not able to verify that there have been *no* diversions.”³³³ In fact neither the Board nor the Secretariat have set the bar too high. The Board has not required proof beyond reasonable doubt, as in criminal trials, but has been “content with evidence, or even just grounds for suspicion.”³³⁴ As we have seen, the Secretariat has concluded that it can use the flexibility provided by CSAs and even the Statute itself to characterize non-compliance in a variety of ways.

Pierre Goldschmidt has proposed that the Board make clear that any state-specific report by the Secretariat to the Board, whether it uses the term “non-compliance” or not and “unless explicitly stated otherwise,” should be considered “non-compliance” (or a progress report on verification activities following a case of non-compliance).³³⁵ The Board should then automatically report such cases to the Security Council. Presumably the idea is to act as a deterrent and strengthen the non-compliance regime. Goldschmidt even proposes that the Board issue retrospective resolutions on Egypt and South Korea that declare them to have been in non-compliance and to retroactively report them to the Security Council “for information purposes only.” This seems unlikely to happen. None of the parties involved will want to resurrect these cases (it also smacks of double jeopardy). The problem with Goldschmidt’s proposal is that it injects automaticity into a process that to date has benefited from flexibility (he would argue that there has been too much flexibility). In any event to avoid automaticity the Director General’s report could use the loophole of “specifically stating otherwise” and the situation would be the same as it is today.

In conclusion, regardless of how the Secretariat characterizes a particular case, the Board has determined, through practice, that in response to a Secretariat report of an alleged or actual non-compliance case it may choose from the following options:

- a. decline to find a state in non-compliance (accompanied usually by a demand that steps be taken by the state to clarify the situation and cooperate with the IAEA)
- b. find the state in non-compliance and delay reporting it to the Council, while taking other steps such as diplomatic negotiations and ad hoc accords, to induce the state to return to compliance
- c. find the state in non-compliance and report it to the Council “for information purposes only” (a Board innovation not mentioned in any legal document) or

333 ICNND, *Eliminating Nuclear Threats*, para. 9.15, p. 87.

334 Jenkins, “Staying Credible,” p. 3.

335 Goldschmidt, “Exposing nuclear non-compliance,” p. 156.

- d. find the state in non-compliance and immediately report to the Council, on the assumption that the Council will be “seized” of the issue and take some action.

Guidelines to Help Define Non-Compliance

An idea that has been mooted for some time is the formulation of guidelines to help the Secretariat and/or the Board define, or at least identify more clearly, a case of non-compliance. In November 2004, in the wake of the South Korea case, Australia proposed to the Board that “not every safeguards breach amounts to non-compliance” and that what was required was a way to measure the seriousness of a non-compliance case.³³⁶ The British Cabinet in 2010 also appeared to think this was a good idea: “The U.K. would like to discuss with the Agency and Member States at the earliest possible opportunity past practices in exposing and addressing non-compliance by the Agency [sic], with the aim of reaching a common understanding on the definition of non-compliance.”³³⁷

Australia suggested that since the Board is required under the Statute to report non-compliance to the Security Council—the guardian of international peace and security—non-compliance should be defined as safeguards breaches that have possible implications for international peace and security. In its resolution reporting Iran to the Council the Board indeed invoke this consideration. It not only cited Article XII.C of the IAEA Statute, but Article III.4. The latter provides that: “...if in connection with the activities of the Agency there should arise questions that are within the competence of the Security Council, that Agency shall notify the Council, as the organ bearing the main responsibility for the maintenance of international peace and security.”

The difficulty with this proposal is that it should be up to the Security Council, not the Board of Governors, to decide what type or level of non-compliance has implications for international peace and security. Even the Security Council itself does not have an agreed definition, making it hard for the Board to anticipate the Council’s likely response. Like the IAEA’s judgments on non-compliance, the Council has been flexible and expansive in considering what is a threat. Climate change, for instance, is now considered to be one. Sometimes seemingly low levels of safeguards non-compliance have significant implications for international

336 Australian Statement, IAEA Board of Governors, November 25–26, 2004, Agenda Item 4(c)—Implementation of the NPT safeguards agreement in the Republic of Korea. Australia argued that the ROK should not be held in non-compliance because its experiments did not constitute a non-proliferation risk: they were small scale and involved small amounts of nuclear material; they were conducted for a relatively short period and then discontinued; there was no indication that they were part of any ongoing program for production of fissile material; and there was no indication of other undeclared activities.

337 British Cabinet Office, *The Road to 2010: Addressing the Nuclear Question in the Twenty-First Century*, CM 7675, July 2009, para. 6.3, www.cabinetoffice.gov.uk/media/224864/roadto2010.pdf.

peace and security, while at other times they do not and it would be ridiculous to alert the Council on that basis. The North Koreans' failure to declare relatively small amounts of nuclear material turned out to be a harbinger of a nuclear weapons program, while South Korea's did not.

Still, the idea of guidelines (as opposed to strict definitions) for helping the Secretariat and the Board determine non-compliance appears, at first glance, to be attractive. Guidelines might be most useful for Governors newly elected to the Board in helping their delegations frame the issues. Such a document might also be useful in structuring Board debate on any particular case. The Secretariat may already have compiled such guidelines for its internal use.³³⁸ Wisely, even if it has them it would be unlikely to share them with Board members lest it be held to them too rigidly. There is also the danger that the Board might start to renegotiate such guidelines and dilute or muddy them. The closest that the Secretariat has come, at least publicly, is the list of examples of non-compliance in the Safeguards Glossary arranged, by category of safeguards agreement.³³⁹

- a. under an INFCIRC/153-type safeguards agreement, the diversion of nuclear material from declared nuclear activities, or the failure to declare nuclear material required to be placed under safeguards;
- b. under an INFCIRC/66-type safeguards agreement, the diversion of the nuclear material or the misuse of the non-nuclear material, services, equipment, facilities or information specified and placed under safeguards;
- c. under an additional protocol based on INFCIRC/540, the failure to declare nuclear material, nuclear activities or nuclear related activities required to be declared under Article 2;
- d. under all types of agreement, violation of the agreed recording and reporting system, obstruction of the activities of IAEA inspectors, interference with the operation of safeguards equipment, or prevention of the IAEA from carrying out its verification activities.

John Carlson, who has probably done more work than anyone in trying to devise a basis for such guidelines, suggested the following considerations, which flesh out the Secretariat's examples:³⁴⁰

³³⁸ No current or past Secretariat official has been able to confirm the existence of such guidelines.

³³⁹ IAEA, *IAEA Safeguards Glossary*, p. 14.

³⁴⁰ John Carlson, "NPT Safeguards Agreements—Defining Non-Compliance," Revised version, October 8, 2009 (an earlier version published in *Arms Control Today*, May 2009), pp. 4-5.

- is there diversion of nuclear material to nuclear weapons, to purposes that *could* be related to nuclear weapons or to purposes unknown that *could* include nuclear weapons?
- where undeclared nuclear activities have been discovered, do these involve fissile material or production of fissile material – i.e. enrichment or reprocessing? If so, are the quantities involved significant, or is there indication of an intention to scale up the undeclared activities to produce significant quantities?
- what is the context of the safeguards breaches: is there a systematic pattern of breaches: are the nuclear materials and the activities involved of a nature that *could* be relevant to nuclear weapons: might they be part of an overall program aimed at acquiring nuclear weapons?
- is the IAEA being obstructed in carrying out its safeguards activities – e.g. inadequate cooperation with inspections, failure to produce records, interference with safeguards equipment, etc. – so that the IAEA is not able to exclude the existence of diversion or undeclared nuclear activities?
- what is the overall record of the state on performance of safeguards and non-proliferation commitments?

These are all sound questions and presumably represent those at least implicitly considered by the Secretariat and at least some Board members.

Former U.K. governor Peter Jenkins has noted that the cases where the Board has found non-compliance that needed reporting to the Security Council share five characteristics:³⁴¹

- undeclared activities detected and reported by the inspectors have involved or been related to the production of fissile material
- the inspectors have reported evidence that nuclear material required to be safeguarded has not been placed under safeguards or, having been under safeguards, has been diverted
- the inspectors have reported evidence of the state concerned pursuing a policy of concealment prior to the breach or breaches coming to their notice
- the inspectors have reported evidence that the non-declaration or diversion of material required to be safeguarded has been deliberate, and

³⁴¹ Jenkins, pp. 2-3.

- the inspectors have reported grounds to suspect or evidence of an underlying intent to gain the capacity to produce nuclear weapons.

The difficulty with all of these proposals is that, even if such guidelines were agreed and promulgated, they would still be so broad as to be open to interpretation. Applying them in any one case would be subject to the peculiarities of that case. Key terminology from Carlson's list that is likely to be contested includes: "could"; "significant"; "intention"; "systematic pattern"; "part of"; "obstructed"; "inadequate"; "failure"; "interference"; and "overall record." In Jenkins' list the question of what really is "evidence" is critical, as are questions about the meaning of "a policy of concealment," deliberateness and intent. One can imagine the accused state contesting all of these. The strength of the evidence, the way the Secretariat has marshalled and interpreted it, and the skill with which the Director General makes the case will likely be just as important as guidelines for what is and what is not non-compliance.

Jenkins himself proposes additional reasons why a precise definition of non-compliance might be risky. First, it might give rise to a majority of Board members declining to report a case to the Security Council that fell outside the definition, even though it had implications for international peace and security. Second, it would deprive governments of most of the discretion that they currently enjoy as Board members. Jenkins argues that such flexibility "enhances the global community's capacity to manage the nuclear non-proliferation regime: it does not impair that capacity."³⁴²

Ideally the Board rather than the Secretariat should be responsible for devising non-compliance guidelines, but the difficulties in having 35 Governors agree, not to mention the entire IAEA membership if it wants to become involved, are likely to be insurmountable. Jenkins also argues that the NAM is likely to view any attempt to make reporting to the Security Council more likely as "strengthening the non-proliferation pillar of the NPT without any compensating reinforcement of the nuclear disarmament or peaceful-uses pillars,"—the timeworn argument that emerges in almost all IAEA debates.³⁴³

Even if Board members can be induced to use agreed guidelines in their decision-making, there are additional, political criteria that they, either explicitly or implicitly, will always deploy. These include:

³⁴² Jenkins, p. 4. He points out that it has not prevented the Board from ultimately arriving at non-compliance findings where warranted to date.

³⁴³ Jenkins, p. 5.

- is the accused state involved a close ally or potential ally?
- are there other issues in the bilateral relationship with the accused state that are more important than the non-compliance allegation?
- should the Agency give the state the benefit of the doubt to explain further and rectify the situation before being accused of non-compliance?
- are there precedents for other current and future cases that need to be considered?
- if the state is declared in non-compliance would the Security Council be willing or able to act in response?
- would finding the state in non-compliance and reporting it to the Council enhance or detract from international security overall, taking into account other current international events and issues?³⁴⁴

As Carlson himself notes, “It is inappropriate to apply a rigid approach to determinations of compliance. The facts are likely to be complex, and a case-by-case approach is required.”³⁴⁵ Peter Jenkins recommends a “case-law approach” to “help fill the vacuum created by the absence of a definition of non-compliance in the IAEA statute while leaving intact the freedom of governments to give a state that has breached its undertakings the benefit of the doubt or to delay a finding to create space for diplomacy.”³⁴⁶

Certifying a Return to Compliance

Finally, an issue that has arisen periodically is how a state is to be declared by the Secretariat or Board to be back in compliance. There is no established procedure and the precedents are varied. The Secretariat has never issued a formal determination that a state has returned to full compliance or that a non-compliance case has been “closed.” Normally the Secretariat simply re-lists the state in the appropriate category in the SIR, along with all other states that are in compliance with their respective safeguards agreements at that time. Sometimes it has informed the Board that steps have been taken by the state to return to compliance, as in the cases of Romania and South Korea. The Board in these cases simply accepted the Secretariat’s advice, but adopted no resolution formally declaring the case closed. Egypt’s case, meanwhile, was left dangling and no determination was explicitly made, either by the Secretariat or the Board, although the SIR for 2008 did say that certain issues were “no longer outstanding.”

³⁴⁴ For example, does it make sense to pursue Syria’s non-compliant behavior when it is engaged in a vicious civil war with enormous humanitarian, human rights, and regional security implications?

³⁴⁵ Carlson, “Defining Non-Compliance: NPT Safeguards Agreements,” p. 6.

³⁴⁶ Jenkins, p. 5.

In the cases of North Korea, Iran, and Syria, they remain in non-compliance until declared otherwise.

It is the Iraq, Iran, and Libya cases where the question of “absolution” has arisen most insistently. In the Iraq and Iran cases, the United States and presumably other likeminded Western states, were concerned that the Director General would, on his own initiative, declare that the state was back in compliance. In the Iraq case, as we have seen, Director General Blix’s view was that by early 2003 the nuclear file could essentially be closed in terms of Iraq’s past non-compliance due to diminishing returns from continuing fruitless inspections. The emphasis, he felt, should shift to future compliance through the OMV process. The U.S. opposed this view, concerned that such a declaration would harm its chances of obtaining Security Council approval for an invasion of Iraq justified by the alleged WMD threat.

In the Iran case, fearing that Director General ElBaradei might prematurely declare that Iran had returned to compliance (although this seems highly unlikely given his sensitivity about even using the word “non-compliance” in the first place), the United States contrived to have the Board adopt a resolution on Libya in September 2008 to set a precedent that it was for the Board, not the Director General, to declare that a state had returned to compliance.³⁴⁷ Yet the Board still relied on the Director General’s conclusion that the issues that the Board had been concerned about were “no longer outstanding at this stage.”³⁴⁸ The Board’s resolution on September 24, 2008 was similarly underwhelming, simply welcoming Libya’s full cooperation with the IAEA and supporting a return to routine safeguards implementation, but not stating explicitly that the state was back in full compliance.³⁴⁹ The Libya precedent was cited by the U.S. mission in Vienna following discussions in 2009 with the IAEA Secretariat about how to bring about a finding that Iraq was now in compliance with its safeguards agreement. But as the conclusion of the Iraq case shows, in the end the Board did not issue such “absolution.” The denouement came with a letter from the Director General to the Security Council.

In theory one can see the benefits of a clear division of labor between the Secretariat and the Board in declaring a state to have returned to compliance. The former would provide the evidence on which such an assessment would be made, while the Board would make the decision. However the reality is not so simple. The Board cannot, either in practical or political terms, simply pluck a conclusion out of mid-air but will instead look to the Secretariat to provide its assessment and to suggest how a conclusion should be characterized. The one

³⁴⁷ See “IAEA/Iraq: formally finding Iraq in compliance with its safeguards agreement,” cable from U.S. Mission, Vienna to State Department, April 29, 2009, released by Wikileaks, posted on Public Library of U.S. Diplomacy, https://www.wikileaks.org/plusd/cables/09UNVIEVIENNA193_a.html (accessed September 30, 2015).

³⁴⁸ GOV/2008/39, p. 7.

³⁴⁹ GOV/2008/51/Rev.2.

example, from the earliest days of the Iraq case, where the Secretariat prepared for the Security Council a barebones report on inspections, simply citing “evidence” but without assessing Iraqi compliance, quickly revealed itself as inadequate and an abrogation of the Secretariat’s statutory obligation. It was never repeated. It is after all the technical staff of the Secretariat, not the Security Council or the Board of Governors, which is supposed to have the expertise and experience necessary for determining what evidence reveals about compliance or non-compliance. For its part, however, the Secretariat will be seeking to learn how far the Board is likely to want to go in its characterization. There is thus a symbiotic relationship between the Secretariat and the Board in declaring a non-compliance case to be over, just as there is in declaring a state to be in non-compliance in the first place. Collaboration is key.

PART 4: THE SAFEGUARDS IMPLEMENTATION REPORT (SIR)

The Director General each year presents a Safeguards Implementation Report for the previous year, compiled by the Safeguards Department, to the Board of Governors. It is “noted” by the Board at its June meeting. The Board first requested such reports, at U.S. behest, in 1974. Its format was proposed by the Standing Advisory Group on Safeguards Implementation (SAGSI) as its first task after its establishment in 1975.³⁵⁰

The original aim appears to have been to ensure critical examination by the Agency and its members of how the safeguards system was working. Olli Heinonen says its initial purpose was “to demonstrate to the member states the efficacy of the verification system, and at the same time show that [the safeguards] burden was properly distributed.”³⁵¹ Although assessing states’ compliance with their obligations may not have been the original intention (and states would probably have resisted had this been made explicit), it is impossible for the Secretariat to assess the system’s effectiveness without considering states’ individual and collective compliance.³⁵² Today, as originally intended, the SIR continues to provide information on difficulties the Department has encountered in fulfilling its safeguards mandate—“a sort of annual health checkup on safeguards.”³⁵³

The SIR now also includes the “safeguards conclusions” drawn for each state, as well as sections devoted to cases of non-compliance for which the Secretariat has produced special reports to the Board. But the reports rarely “name names” when it comes to lesser cases of non-compliance, safeguards issues of concern in a particular state, or a lack of cooperation from a state in implementing safeguards. Fischer and Szasz criticized this practice as early as the mid-1980s.³⁵⁴ The practice is inconsistent, however. Sometimes the state is named, as in the case of the 2008 SIR, which contained a whole page on Egypt, while others are left anonymous.³⁵⁵

350 Fischer, p. 259.

351 Olli Heinonen, June 10, 2013 comment on Mark Hibbs, “Safeguards in the Spotlight,” *Arms Control Wonk*, June 9, 2013.

352 It is common in the arms control field to use the word implementation rather than compliance when assessing a treaty’s effectiveness, although clearly compliance by states with their obligations, not just how the verification body is performing, is a major component of treaty implementation.

353 Pierre Goldschmidt, “Serious deficiencies exposed by latest IAEA safeguards implementation report,” Carnegie Endowment for International Peace, Washington, D.C., June 25, 2013, <http://carnegieendowment.org/2013/06/25/iaea-safeguards-implementation-report-for-2012-countries-of-concern> (accessed September 30, 2015).

354 Fischer and Szasz, p. 65.

355 Cited in Pierre Goldschmidt, “The IAEA reports on Egypt: reluctantly?,” *Proliferation Analysis*, June 2, 2009, Carnegie-Tsinghua Center for Global Policy, <http://carnegietsinghua.org/publications/?fa=23200> (accessed September 23, 2015).

Distribution of the SIR is meant to be “Restricted” and “For official use only” by IAEA member states and the Secretariat. Fischer and Szasz labelled this a “quasi-confidential approach.”³⁵⁶ To increase transparency without releasing the SIR publicly, it has become standard practice for the Board since 2000 to authorize the public release of a “Safeguards Statement,” drawing from the SIR but excluding the more detailed and sensitive information.³⁵⁷ In practice the SIR itself has often been leaked.³⁵⁸ In June 2013, following the Board meeting, the SIR for 2012 was leaked but only to the media (it remains unobtainable online). In 2014 and 2015 the SIRs were also leaked, but this time posted online for all to see, enabling the following analysis.

The 2013 and 2014 Reports

The 2013 and 2014 reports (for 2012 and 2013 respectively) are roughly the same length (86 versus 88 pages) and follow the usual format.³⁵⁹ To the uninitiated they are confusing and repetitive. Part B, “Background to the Safeguards Statement and Summary,” which is intended to be released publicly after the Board’s approval, is a self-contained document that encapsulates and uses key sentences from the remaining parts. Parts C through G and the Appendices are intended to be confidential, for release to member states only, and thus provide much more detail, but also repeat much of what is in Part B.

The crucial parts, from a non-compliance perspective, are Part C on “Safeguards Implementation” and Part D, “Areas of Difficulty in Safeguards Implementation.” The remaining parts cover the Agency’s own efforts in “Strengthening the Effectiveness and Improving the Efficiency of Safeguards” (Part E); “Safeguards Expenditure and Resources” (Part F); and “Further Activities Supporting the Nuclear Non-proliferation Regime” (Part G).

356 Fischer and Szasz, p. 68.

357 There have been several permutations over the years. Some contain only “Background,” while others have, in addition, an “Executive Summary” or “Summary.” The latter is the current practice.

358 For example the 2008 SIR was leaked before its consideration by the Board in June 2009.

359 IAEA, *The Safeguards Implementation Report for 2013*, GOV/2014/27, (Vienna: IAEA, April 23, 2014).

Safeguards Implementation

This section of the SIR records the Secretariat's basic conclusions about compliance by the 180 states that had some type of safeguards agreement with the Agency.³⁶⁰ Mark Hibbs calls this part of the SIR "fairly cut and dried,"³⁶¹ presumably meaning that it has not changed much over the years. States are divided into categories, namely those with:

- a CSA and an AP
- only a CSA
- a Small Quantities Protocol (SQP), both the original and amended versions, which hold in abeyance certain aspects of a CSA
- no CSA (even though all states parties to the NPT are legally obliged to have one)
- INFCIRC/66 agreements (India, Pakistan, and Israel only), and
- Voluntary Offer Agreements (the nuclear weapon states only).

The SIR these days contains charts and graphs, as well as detailed annexes and data on safeguards activities, aggregated for all states and grouped according to the above categories.

Although all states are named in one way or another, the vast majority are simply grouped in categories of states to which the same conclusions apply. In 2014, for the 118 states with a CSA and AP in force, the following generic conclusions were reached:³⁶²

- (a) For 65 of these States, the Secretariat found no indication of the diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared nuclear material or activities. On this basis the Secretariat concluded that, for these States, all nuclear material remained in peaceful activities.
- (b) For 53 of these States, the Secretariat found no indication of the diversion of declared nuclear material from peaceful nuclear activities. Evaluations regarding the absence of undeclared nuclear material and activities for each of these States remained ongoing. On this basis, the Secretariat concluded that, for these States, declared nuclear material remained in peaceful activities.

³⁶⁰ This number does not include North Korea, where the Agency was unable to implement safeguards, and "Taiwan, China," which the Agency is unable to describe as a state, but which does have a safeguards agreement in force.

³⁶¹ Hibbs, "Safeguards in the spotlight."

³⁶² GOV/2014/27, p. 1.

Similarly, for the 54 states with only a CSA in force the Agency issued a generic conclusion that their declared material remained in peaceful activities. Ironically, this included Iran, even though Iran has been found in non-compliance with other aspects of its safeguards agreement. This is an example of IAEA non-compliance reporting not making much sense to the uninitiated.

The 12 non-nuclear weapon states party to the NPT which have failed to conclude a CSA were named as a group, along with the Secretariat's declaration that it could not draw any safeguards conclusions about them due to the lack of an agreement.

Apart from being named in their respective categories, there are no details on the majority of individual states' compliance records for the year, even though there were clearly difficulties with several, as is apparent from the report's discussion of "areas of difficulty" in safeguards implementation. One problematic aspect of the SIR is that it hides state non-compliance, for whatever reason it has occurred behind the concept of "safeguards implementation." An implementation issue could either be the Agency's fault, a technical failing, a state's lack of cooperation with the Agency, or substantive non-compliance.

Reports on Serious Non-Compliance Cases

While in general the SIR does not single out specific states for special mention, it does so in the case of states which are considered as having been found in non-compliance and whose cases are being considered by the Board of Governors and/or are seized of by the Security Council. Hence the 2013 and 2014 reports have a section on Iran that essentially summarizes material already submitted to the Board in four special reports in each year (and which are public). Likewise Syria is also named and has its own section, as does the DPRK.

In addition to these well-known cases of non-compliance the 2013 report also, somewhat surprisingly, singles out two other countries for special attention—Japan and Uzbekistan. The text is identical in both the public Safeguards Statement and in the section intended to be for member states only.

In the case of Japan the report records that due to the 2011 accident at the Fukushima Daiichi nuclear power plant a "considerable amount of nuclear material in fuel assemblies

and core debris remain inaccessible for verification.”³⁶³ Transfer and re-verification of that material is expected to continue for several years. As the clean-up and decommissioning activities at the site progress, the safeguards measures at the plant “will be adapted accordingly.” It is striking that the issue is treated as a purely technical one, with no impact on retaining Japan in the list of states³⁶⁴ for which the safeguards conclusion is drawn that “all nuclear material has remained in peaceful activities.” This is despite the fact that the situation cannot, since the Fukushima accident, be definitively verified. In this way the SIR does not follow its own logic in drawing safeguards conclusions. The 2014 report recorded that “notable progress was made during 2014 and by the end of the year the Agency was able to re-verify approximately 80% of the nuclear material which was on site at the time of the Fukushima accident, an increase of 10% over the previous year.”³⁶⁵

As for Uzbekistan, the report records that in 2013 that country failed to declare small amounts of nuclear material and some small scale nuclear activities. It had “recently addressed some of these issues,” while the Agency “continues to work with Uzbekistan to resolve the remaining issues.”³⁶⁶ Nonetheless the Agency concluded that it “had not found any indication from information currently available that, in its judgment, would give rise to a non-proliferation concern.”³⁶⁷ Uzbekistan also had a brief special section in the 2014 report, which reported that most of the issues reported in 2013 had been satisfactorily addressed.³⁶⁸

Areas of Difficulty in Safeguards Implementation

This section of the SIR essentially lays out states’ lack of cooperation in implementing safeguards, not the Agency’s shortcomings in doing so. In the public version it is one of the smallest sections of the annual report and only covers the issue of SSAC performance and the amendment of SQPs.³⁶⁹ Mark Hibbs distinguishes this section from compliance by calling it “performance evaluation.” He claims that this part of the report “has been evolving over the years and is still evolving, depending in part on who is writing the report and what guidance they get.”³⁷⁰ Olli Heinonen is more critical, saying that this part of the

³⁶³ GOV/2014/27, p. 24.

³⁶⁴ GOV/2014/27, p. 5 and 24.

³⁶⁵ IAEA, *The Safeguards Implementation Report for 2014*, GOV/2015/30, (Vienna: IAEA, May 6, 2015), p. 22.

³⁶⁶ GOV/2014/27, p. 24.

³⁶⁷ GOV/2014/27, p. 25.

³⁶⁸ GOV/2015/30, p. 22.

³⁶⁹ As part of the move to strengthen safeguards after the Iraq case, the Board agreed in 2005 that such states should amend their existing SQPs to require them to provide more information to the Agency and to give it greater verification powers than under the old model.

³⁷⁰ Hibbs, ‘Safeguards in the spotlight’.

report is shrinking and being increasingly devoted to the costs of safeguards rather than a self-evaluation of safeguards effectiveness.³⁷¹

The 2013 and 2014 reports record that some states (unnamed) still had not established SSACs, despite the fact that they are required to do so under CSAs. Moreover, not all state or regional authorities have the “necessary authority, resources, technical capabilities or independence” from the operators of nuclear facilities or other locations where nuclear material is present. Most alarmingly, the reports say, some state authorities do not provide “sufficient oversight of nuclear material accounting and control systems” at nuclear facilities “to ensure the required accuracy and precision of data transmitted to the Agency.” This would appear to be a serious undermining of the effectiveness of safeguards given that accuracy of accounting is crucial to determining whether diversion to weapons purposes has occurred. Again there is no naming of names.

This lack of candor is in contrast to the review process for the Convention on Nuclear Safety (CNS) in which states are expected to make periodic reports on implementation of their obligations, one of which is to establish an independent nuclear regulator. Japan was repeatedly criticized at such meetings, prior to the Fukushima accident, for the lack of independence of its regulator.

The 2013 SIR also criticizes the slow pace of states’ progress in amending or rescinding their SQPs. At the end of 2014 there were still 42 states (down from 44 in 2013) with old-style SQPs,³⁷² including the United Arab Emirates (UAE) and Saudi Arabia, both of which have announced plans to build several nuclear power reactors. Although the reports at least list the laggards (albeit in a footnote), no further information is provided. The 2014 report did note that New Zealand had amended its SQP to reflect the revised standard text.³⁷³

The section of the report that is meant to be confidential has much more information about non-cooperation, but still does not name names. The 2013 and 2014 reports note that problems continued in some states with regard to a number of “issues,” including provision of visas to inspectors, designation of inspectors (states must agree to individual inspectors designated to inspect their facilities), timeliness and accuracy of reporting, inclusion of specific nuclear material in inventory reports, provision of access by inspectors and agreement to apply the required safeguards measures.

³⁷¹ Interview with Olli Heinonen, Harvard, June 5, 2015.

³⁷² GOV/2014/27, p. 11.

³⁷³ GOV/2015/30, p. 29.

Some of these would again appear to be fundamental to the effectiveness of safeguards and in some cases cannot be considered minor. For example the Agency complains that effectiveness of safeguards was compromised by a failure by several states to provide early design information on new nuclear facilities in advance, in compliance with modified Code 3.1 of their Subsidiary Arrangements.³⁷⁴ This is the famous provision that Iran has steadfastly refused to comply with (although this is scheduled to change under the JCPOA concluded in July 2015).³⁷⁵ Several states also did not “sufficiently facilitate the clarification or resolution of Agency questions, including those concerning the correctness or completeness of their declarations.”³⁷⁶

The report also notes that several states delayed access by Agency inspectors to perform their verification activities within agreed timeframes; limited inspector activities; limited or did not permit environmental sampling; or did not provide the necessary access as requested by the Agency.³⁷⁷ Refusal of access included that required to verify design information in areas of facilities not containing nuclear material or to locations where the Agency considered access was required to ensure the absence of undeclared nuclear material or activities. In addition some states, the Agency reported, have delayed shipment of destructive analysis samples, thus “preventing their timely analysis for drawing safeguards conclusions.” In 2013 one (unnamed) state denied complementary accesses until high-level consultations with the Agency took place.

With regard to the timeliness of reports, the document contains a table (Fact box 9) setting out the details, some of which are alarming.³⁷⁸ This was apparently a novelty in the 2012 report³⁷⁹ that was repeated in 2013 and 2014. Required reporting from states with an AP seems particularly lax. In 2013, 22 states with an AP in force had not submitted any additional AP declarations beyond their initial one, while 19 had not yet even submitted an initial one. A total of 503 declarations from 55 states were dispatched after the date specified in the AP, while 1202 declarations had not been received from 48 states since their APs entered into force. The 2014 version of this “Fact box” was half the size of the 2013 version and thus contained much less information. For example, the alarming figures for 2013 for the total number

374 The Board recommended in 1992 that all states with a comprehensive safeguards agreement concur in the modification of their Subsidiary Arrangement (Gov/2554/ATT.2/Rev. 2. See Subsidiary Arrangement to the Agreement between the Government of [.....] and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons, 5th Revision, 2011, https://www.iaea.org/safeguards/documents/Online_Version_SG-FM-1170_-_Model_Subsiary_Arrangement_Code_1-9.pdf (accessed September 30, 2015).

375 It has again agreed to comply with it as part of the JCPOA of July 14, 2015.

376 GOV/2014/27, p. 30.

377 GOV/2014/27, p. 29.

378 GOV/2014/27, p. 30.

379 Mark Hibbs noted “the attention in the 2012 document to the matter of timely reporting which is not equaled in any previous annual SIR reports I’ve seen” (Hibbs, “Safeguards in the spotlight”).

of late AP declaration submissions were missing from the 2014 box. It seems the Secretariat is retreating from transparency rather than expanding it.

The SIR's annexes do set out in detail the verification activities undertaken by the Agency in 2013 in each state—a rare form of transparency about individual state performance (albeit confined to an annex). The charts include the percentage of AP declarations or accounting reports submitted late. Many of the late or non-existent reporters were smaller, poorer developing countries with no nuclear materials or facilities, which struggle to keep up with all sorts of international reporting obligations. However, among the persistently late reporters were Brazil (42 percent), Denmark (42 percent), the Democratic Republic of Congo (100 percent), Morocco (86 percent), Namibia (100 percent), New Zealand (87 percent), Serbia (100 percent), Thailand (87 percent), and Venezuela (100 percent).³⁸⁰ Some of these states have uranium mining operations, while others aspire to acquiring nuclear energy. Unfortunately the late reporting percentage column was removed from the charts in the 2014 report,³⁸¹ perhaps due to the leaking of the 2013 report, another case of the Secretariat going backwards in its transparency and holding states to account.

Finally, with regard to bulk material measurements by nuclear facility operations, the Agency comments that while these “generally met their international target ‘values,’” measurements in some facilities showed evidence of biases and/or poor measurement quality. As a result, the material balance evaluations for such facilities showed “large and/or statistically significant values for material unaccounted for.”³⁸²

The 2013 and 2014 SIRs, as former DDG for Safeguards, Pierre Goldschmidt said of the leaked 2012 report, revealed “rather troubling details” of safeguards implementation.³⁸³ This situation raises the question of when such non-fulfilment of safeguards requirements becomes non-compliance. It also raises the question of double standards in compliance reporting. While Iran has been exposed and repeatedly criticized for not complying with modified Code 3.1, other states doing the same have not been exposed. Clearly the Agency prefers to privately apply pressure on such states to comply. But without public exposure the ability of the Agency to apply such pressure is surely limited and the lack of

380 These states often had vastly different reporting obligations, depending on the size of their nuclear establishment and the type of safeguards agreement they had committed themselves to. States with an AP are required to provide much more information compared to those with just a CSA. Brazil, with just a CSA, submitted 1351 accounting reports in 2013 and was still 42 percent late, while Japan, with a CSA and AP, submitted 30,390, less than 1% of which were late.

381 GOV/2015/30, pp. 67-88.

382 GOV/2014/27, p. 30.

383 Goldschmidt, “Serious deficiencies exposed by latest IAEA safeguards implementation report,” p. 1.

transparency leaves the rest of the international community in the dark. With so many states to monitor, it is also unrealistic to expect the Agency to have the time or resources to consistently and comprehensively apply such pressure. While the argument is made that such states, which are mostly African or small island states, have significant governance challenges, are not a threat to the non-proliferation regime and should thus be allowed some slack, this is clearly untenable from the perspective of non-discrimination among member states, a founding and enduring principle of safeguards and one that the developing countries insist on most vociferously.

Criticism of the SIRs

The SIRs have long been criticized for their content (or lack of it), format, and confidentiality. As to content, they do not, despite their name, provide a comprehensive view of safeguards implementation: they focus on the general safeguards conclusions reached about categories of states and do not give a clear picture of each individual state's compliance unless there are serious violations. Even here there is inconsistency of approach, as the 2013 and 2014 reports indicate. Japan and Uzbekistan are singled out, but they cannot be the only problem states, as the general statistics on barriers to implementation indicate.

The SIRs do provide metrics about what the Agency has done to implement safeguards, but no reckoning of the effectiveness of such efforts. Although clearly frustrating to the Secretariat, such challenges are, Roger Howsley notes, “frequently glossed over.”³⁸⁴ The SIRs also contain no recommendations about what should be done to rectify compliance problems. As Howsley says, although the SIRs are data-rich, they tend to be information poor. They are opaque and specialized, with a small readership, when they should be, he argues, the most important document published by the IAEA. He, along with many others, including Olli Heinonen, have called for the SIR's public release, taking into account the need for safeguards confidentiality. Howsley argues that “greater transparency and accountability may provide the oxygen for improvement.”

The issue of safeguards confidentiality is perpetually raised as an obstacle to a state-by-state public accounting of compliance, as if this were self-evident. However the Agency has not convincingly demonstrated that any loss of confidentiality would be necessary for such an approach. Surely if a state has not provided timely access by inspectors to its facilities, failed to establish a reputable SSAC, fumbled the accounting of nuclear materials, or

³⁸⁴ Roger Howsley, “The safeguards implementation report – time for transparency?” (discussion paper for Standing Advisory Group on Safeguards Implementation (SAGSI) Working Group, 2008).

declined requests for complementary access it should be publicly exposed. None of this information remotely involves safeguards confidentiality. The leaking of the reports for 2012, 2013, and 2014 did not involve breaches of confidentiality, although they probably did embarrass some states. SAGSI has considered whether to reform the format and content of the SIR for a number of years. However because its proceedings are confidential and its recommendations only provided to the Director General, it is not clear what measures it has proposed to improve the document or whether it has argued for greater transparency.

One difficulty that must be avoided arose from Canada's experience some years ago. It welcomed greater transparency in the SIR, but discovered that the reference to safeguards goals not being fulfilled in Canada did not make clear that it was the Agency's fault, not Canada's.³⁸⁵ The Secretariat had been unable to conduct the number of planned inspections due to personnel shortages. Australia also had an incident in implementing its AP (the first country to do so). Inspectors advised Australia that it did not need to declare certain material, but when it was "discovered" by later inspections the Secretariat considered listing it as an anomaly, even though Australia had acted in good faith.³⁸⁶ After Australian protests the Secretariat reconsidered. If the SIR is to be released publicly it would be worthwhile giving states notice that they are to be mentioned specifically in order to give them a chance to respond prior to its release.³⁸⁷

One reason the Agency is reluctant to provide more state-by-state analysis is that it may reveal not just the shortcomings of the state, but those of the Secretariat as well or instead. If a decision is made to release the SIR publicly the Secretariat will thus need to be careful to put the results into context, not just for the sake of member states but for its own credibility.³⁸⁸ For instance, as indicated, there is a vast difference in terms of the proliferation risk between Jamaica submitting 100 percent of its AP reports late and Denmark, which is responsible for Greenland and its uranium mining activities, being 42 percent late.

Howsley has pointed to the model of the International Civil Aviation Organization (ICAO), based in Montreal, as worthy of emulation by the IAEA.³⁸⁹ Its inspection results for each

385 Information provided by Canadian safeguards officials in Ottawa and Vienna. Some IAEA officials dispute the Canadian version, saying Canada was also at fault.

386 Information from John Carlson, New York, May 27, 2015.

387 A suggestion made by the current Board of Governors Chair, Laercio Vinhas, Brazilian ambassador to the IAEA, at a seminar on a draft of this paper held at the Vienna Center for Nuclear Disarmament and Non-Proliferation (VCDNP) in Vienna on July 9, 2015.

388 Bruce Moran, former head of the Section for Effectiveness Evaluation in the Department of Safeguards, suggests that SIRs should provide more analysis and explanation of the data. See Bruce H. Moran, "Evolving the assessment of the effectiveness of IAEA safeguards implementation," presentation to Institute of Nuclear Materials Management (INMM), January 24, 2012.

389 Howsley, "Safeguards Implementation Report."

member state are posted online, including graphs showing national performance against expected international benchmarks and executive summaries containing recommendations for improvement. The transparency of its reporting, already impressive compared to the IAEA, is improving. The ICAO Council decided that commencing in January 2014 existing “significant safety concerns” (SSCs) would be made available on the ICAO public website.³⁹⁰ New SSCs identified after January 2014, following 90 days on the secure members-only site, are posted on the public website, “in order to give an extra incentive to States to resolve the SSC quickly and to allow a window for assistance activities.” Information on the existence and nature of an unresolved SSC is posted alongside state-specific information already made available on the public website, using standardized wording. This includes the opportunity for the state to “comment and update its progress on the resolution of the SSC, subject, in due course, to validation by ICAO.”

In the future the IAEA Board may be moved to publicly release the SIR preemptively, as it has with reports on major non-compliance cases like Iran after they were repeatedly leaked. But it will take an influential member state or states to bring about such change. While David Fischer complained years ago that the leaked SIRs were selectively used by critics “as a weapon to discredit IAEA safeguards,”³⁹¹ regular deliberate release by the Agency of better prepared SIRs could disarm the critics. It could also garner greater support for the Agency’s efforts to deal with the challenges of safeguards, especially those resulting from a lack of cooperation by member states with even the most basic of obligations.

Finally, the regular public release of the SIR could goad states into improving their record to avoid public embarrassment. Goldschmidt suggests that the Board should request the Secretariat to report more explicitly on “borderline” cases in the SIR, mentioning their names, the difficulties faced in implementing verification and any findings that may raise proliferation concerns.³⁹² He says that past disclosure of the names of states that were not cooperating with the Secretariat often had a “positive effect.” After the 2012 SIR was leaked, several states radically improved their reporting performance the following year. Five of the eight states named in 2012 as having particularly poor reporting records cleared their entire AP reporting backlogs in 2013: Greece submitted 16 reports, Ireland 15, Mexico 17, and Portugal and Uruguay 14 each.³⁹³ Naming and shaming appeared to have worked its magic.

390 See “Safety Audit Information,” International Civil Aviation Organization, <http://www.icao.int/safety/Pages/USOAP-Results.aspx> (accessed September 30, 2015).

391 Fischer, p. 259.

392 Goldschmidt, “Exposing nuclear non-compliance,” p. 158.

393 Hibbs, “Safeguards in the Spotlight” and GOV/2014/27, Appendix II.

CONCLUSION

IAEA non-compliance cases have been unique, dynamic, and non-linear. None has conformed to the trajectory envisaged in the IAEA Statute. It turns out that no two non-compliance cases are alike and none of them match the straightforward and somewhat naïve process envisaged by the drafters of the Statute.

The business of reporting non-compliance with IAEA safeguards has increased in complexity and intensity since the first case arose in 1991. In the absence of statutory detail and additional guidance in safeguards agreements, and a reluctance by all stakeholders to clarify precisely what constitutes non-compliance, the Secretariat has been forced to be innovative and flexible. Political controversy has attended the handling of non-compliance cases at various points, most notably in respect of Iran and Syria. This is inevitable given that the ultimate judgment on non-compliance is made by the Board of Governors representing governments with diverging interests and allegiances.

What is most important in the handling of non-compliance cases is that the Secretariat retain its apolitical, neutral, and technical reputation intact. The decision to no longer consider itself bound to use the term “non-compliance” is on balance a good one. On the negative side it means the Secretariat may no longer, in certain cases, be seen as “calling a spade a spade” by using the word. On the positive side it reinforces the principle that it is Board of Governors that must take responsibility for declaring a state to be in non-compliance, based on the evidence presented to it by the Secretariat. As long as the Secretariat reports the case accurately, along with the necessary caveats and the most credible technical data and analysis, the non-compliance system should benefit. The focus should be on the facts rather than a politically loaded descriptor.

Enduring debates over what constitutes non-compliance are unlikely to be resolved by carefully crafted definitions or guidance. Every such attempt, when it comes to implementation, will be dogged by interpretive difficulties. This is especially likely in the marginal cases where non-compliance is not blatant and damning, but ambiguous and suspicious.

Non-compliance of any kind needs to be treated seriously. Accountability, monitoring, verification, transparency, and full cooperation with the IAEA are all key components of the response. But the safeguards non-compliance process cannot be rendered machine-like and automatic: it must always have room for diplomatic, technical, and other creative solutions

that may not have been foreseen by its originators and continuing practitioners. Nonetheless, it would be useful for the Secretariat to be more transparent about the way it prepares non-compliance reports. As noted, in 2009 it produced an explanatory note for its own use in handling press inquiries that was informative and would be worth updating, elaborating, and making more widely available.³⁹⁴

In addition to publicizing the details of the most egregious non-compliance cases the Agency should be more transparent about all states' compliance with their safeguards obligations. For too long the troubling record of some states has been swept under the rug of general assessments of safeguards implementation as if safeguards were somehow self-implementing. A good start would be made by publicly releasing the Safeguards Implementation Report, but in addition that report should be improved by expanding the analysis and providing more detail about individual states' performance. While the principle of safeguards confidentiality should be respected, it should not be a sacred cow that stands in the way of holding states to account.

The challenges facing the IAEA in dealing with non-compliance demand that member states ensure the Agency has cutting-edge verification technology and analytical tools, well recruited and trained professional and support staff, and generous funding. As the case studies reveal, the non-compliance process, despite the way it rapidly devolves towards technical detail, is still an intensely human process involving interactions between international civil servants and representatives of governments. The cases reviewed in this study emphasize the vital importance of adept Secretariat staff, a skilled Director General, and well informed Governors led by an astute chair. In choosing the Agency's Director General member states need to be conscious that he or she is the public face of the Agency in a non-compliance crisis, the "reporter in chief," and the principal interlocutor with them and with the Board of Governors and the Security Council. Choosing a politically and diplomatically astute Director General who is willing and able to take full advantage of the experience, technical skills, and advice of the Secretariat, while balancing the various interests of member states and other stakeholders, is a tall but necessary order.

394 "Background information on the Safeguards Reporting Process."

POSTSCRIPT: IMPLICATIONS OF AN IRAN DEAL FOR IAEA NON-COMPLIANCE REPORTING

On July 14, 2015 a new phase of the Iran case began with agreement between Iran and the E3/EU+3 (Germany, France, and the United Kingdom/the European Union, plus China, Russia, and the United States) on a Joint Comprehensive Plan of Action (JCPOA).³⁹⁵ It is a long, complex agreement that imposes new constraints on Iran's nuclear program while offering sanctions relief in return. Also on July 14, IAEA Director General Amano and Ali Akbar Salehi, Vice-President of Iran and President of the Atomic Energy Agency of Iran, signed a "Roadmap for the clarification of past and present outstanding issues regarding Iran's nuclear programme."³⁹⁶ On July 20, the UN Security Council, in Resolution 2231,³⁹⁷ endorsed the agreement and added its own requirements. The ramifications of the deal and its intricacies are still being analyzed by the parties and outside observers, and will not become truly apparent until the accord begins to be implemented. The following is a preliminary assessment of the implications for the IAEA and its role in reporting non-compliance.

The Agency will now be involved in even more voluminous and complex reporting on Iran than it has to date, pursuant to even more legal and quasi-legal undertakings by Iran. Prior to the JCPOA these included: the NPT, Iran's CSA, 12 Board of Governors resolutions, six UN Security Council resolutions, an Iran-IAEA Joint Statement on a Framework for Cooperation of November 11, 2013³⁹⁸ and a Joint Plan of Action agreed on November 24, 2013, between Iran and the E3+3 (China, France, Germany, Russia, the United Kingdom, and the United States).³⁹⁹ Essentially the JCPOA, the IAEA Roadmap and Security Council resolution 2231 aim to supersede all of these except Iran's NPT undertakings and its CSA.

Expanded Safeguards Compliance Reporting

In terms of the implementation of customary IAEA safeguards, in addition to Iran's CSA, the JCPOA requires Iran to adopt an Additional Protocol and in the meantime act as if it were in force. It also requires Iran to adopt modified Code 3.1, which requires Iran to notify the Agency

³⁹⁵ "A Joint Comprehensive Plan of Action (JCPOA)," July 14, 2015, Annex A, UNSC Resolution 2231 S/RES/2213, July 20, 2015.

³⁹⁶ "Roadmap for the clarification of past and present outstanding issues regarding Iran's nuclear programme," IAEA Press Release, Vienna, July 14, 2015, <https://www.iaea.org/press/?p=5058/> (accessed September 23, 2015).

³⁹⁷ UNSC Resolution 2231 (2015), July 20, 2015.

³⁹⁸ IAEA, *Iran-IAEA Joint Statement on a Framework for Cooperation*, GOV/INF/2013/14, (Vienna: IAEA, November 11, 2013).

³⁹⁹ See IAEA, *Joint Plan of Action*, INFCIRC/856, November 29, 2013 (Vienna: IAEA, 2013).

of new nuclear facilities from the moment they are planned. These requirements give the Agency new verification and reporting responsibilities, but since it already applies these to scores of other states it will be readily able to do so in the case of Iran. One quirk in the Iran case is that US and EU ballistic missile and proliferation-related sanctions on Iran will be lifted when the Agency has reached the “Broader Conclusion” that all nuclear material in Iran remains in peaceful activities. However this only becomes relevant if it occurs before eight years has elapsed since the JCPOA’s “Adoption Day” (90 days after the Security Council resolution was adopted). All states with an AP are eligible for the Broader Conclusion, but it has often taken many years before states with large nuclear enterprises have received it (Canada took five years). In Iran’s case it could take more than eight years. Since in reaching the Broader Conclusion the Agency must be satisfied that all past nuclear activity has been accounted for in the state concerned, this requirement is an extra assurance that Iran must come clean about all of its past activities, notably the so-called PMD.

In terms of assessing Iran’s compliance with safeguards once it has an AP in force, the IAEA will be seeking to be able to make the following standard statement:⁴⁰⁰

... the Secretariat found no indication of the diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared nuclear material or activities. On this basis, the Secretariat concluded that ... all nuclear material remained in peaceful activities.

To achieve this Iran will need to demonstrate to the Agency that it has no undeclared nuclear materials or activities anywhere on its territory. Currently Iran only gets the following compliance assessment regarding its CSA:⁴⁰¹

While the Agency continued throughout 2014 to verify the non-diversion of declared nuclear material at the nuclear facilities and LOF [locations outside facilities] declared by Iran under its safeguards agreement, the Agency was not in a position to provide credible assurance of undeclared nuclear material and activities in Iran and, therefore, was unable to conclude that all nuclear material in Iran was in peaceful activities.

Wrapping Up the Possible Military Dimensions Issue

Embedded in the JCPOA is the long-running issue of Iran’s PMD. Iran is now obliged to fully implement the Roadmap, agreed with the Agency on July 14, 2015, to address all issues, past and present, listed by the Agency in 2011.⁴⁰² In an Annex to his report of November 2011 the

400 IAEA, *Safeguards Implementation Report for 2014*, p. 1.

401 IAEA, *Safeguards Implementation Report for 2015*, p. 8.

402 GOV/2011/65.

Director General provided a detailed analysis of information available to the Agency at that time indicating that Iran had “carried out activities related to the development of a nuclear explosive device.”⁴⁰³ In his most recent quarterly report on Iran, that of May 29, 2015, the Director General said “The Agency remains concerned about the possible existence in Iran of undisclosed nuclear-related activities involving military related organizations, including activities related to the development of a nuclear payload for a missile.”⁴⁰⁴ In the Joint Statement on a Framework for Cooperation signed by Iran and the Agency on November 11, 2013, Iran undertook to cooperate further with the Agency to “resolve all present and past issues, and to proceed with such activities in a step by step manner.” But of the list of 18 measures, set out in three “steps,” only the first step measures and some in the second had been implemented by Iran by the time the JCPOA was negotiated.

Iran had just three months from July 14, 2015 to complete the activities in the Roadmap. The timetable is tight. It provided by August 15 its explanations in writing and related documents to the IAEA on issues “set out in a separate arrangement” (this is one of the alleged secret side agreements that has roiled U.S. critics of the JCPOA). After receiving these explanations the IAEA reviewed the information by September 15 and submitted questions on “any possible ambiguities” to Iran. Thereafter technical meetings, “technical measures” and discussions were organized in Tehran. The IAEA and Iran agreed on separate arrangements to resolve the Parchin issue (the second so-called secret side agreement). All activities will be completed by October 15, 2015.

By December 15, 2015 the Director General must provide his “final assessment on the resolution of all past and present outstanding issues” to the Board of Governors. The E3/EU+3 will submit a resolution to the Board for “taking necessary action, with a view to closing the issue, without prejudice to the competence of the Board of Governors.” Here the precedent of the Iraq case, where the United States tried to sideline the Board, is not being followed. The competence of the Board is being respectfully observed. The E3/EU+3 will likely have a natural majority in the 35-member Board for having their favored resolution adopted.⁴⁰⁵

403 IAEA, *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran: Report by the Director General*, GOV/2011/65, (Vienna: IAEA, November 8, 2011), Annex.

404 IAEA, *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran: Report by the Director General*, GOV/2015/34, (Vienna: IAEA, May 29, 2015).

405 For the 2015–2016 period, the new composition of the 35-member IAEA Board is: Argentina, Australia, Belarus, Brazil, Canada, Chile, China, Egypt, Finland, France, Germany, Ghana, India, Ireland, Japan, Republic of Korea, Latvia, Macedonia, Malaysia, Mexico, Namibia, New Zealand, Nigeria, Pakistan, Paraguay, Philippines, Russian Federation, Saudi Arabia, South Africa, Spain, Switzerland, Turkey, United Kingdom, United States of America, and Uruguay. The permanent five members of the Security Council and other states with a prominent role in nuclear energy matters are always assured a place on the Board. Resolutions require a simple majority or two-thirds if so decided by a simple majority vote.

The PMD issue is a critical one for the Agency and its credibility. Although the Security Council resolution does not mention the PMD issue and there is no explicit linkage of its resolution to the implementation of the rest of the JCPOA, an unfavorable “final assessment” by the Director General in December 2015 will jeopardize the future of the entire agreement. A “wrap up technical meeting” between Iran and the Agency will be organized before the report is issued, no doubt so the Iranians can challenge anything they do not like.

The language the Agency uses in its December 2015 report will be key, not just to the future of the JCPOA, but to the IAEA’s credibility. Fortunately, the agreement does not require the Director General to certify that the issues have been entirely resolved, but only that he provide an assessment of their resolution. The only previous experience with such a role is the case of Iraq. While the Agency stood its ground in reporting to the Security Council that Iraq had rid itself of its nuclear weapon capabilities, it was subject to politically motivated derision and ultimately was unable, along with UNMOVIC, to head off an invasion of Iraq. While Iran is highly unlikely to confess openly to the Secretariat (and the world) that it had a nuclear weapons program, as South Africa and Libya did, it could provide the Agency with enough information to satisfy it that all its significant past weaponization activities have been accounted for and ended—without specifying the purpose for which they were intended. Iran could also continue to maintain that the weaponization allegations raised by the Agency are fabricated and refuse to provide any new information, leaving it to the IAEA to report that Iran has fulfilled the requirement of providing an explanation, but has not fully resolved all outstanding questions concerning PMD. In either case, this report will require careful word-smithing by the Secretariat and Director General.

New Compliance Reporting Tasks Under the JCPOA

A vastly more complicated set of verification and reporting tasks has been assigned to the IAEA with regard to the multiple new constraints on Iran’s nuclear and related activities in the JCPOA. The Security Council has requested the Director General to undertake “the necessary verification and monitoring of Iran’s nuclear-related commitments for the full duration of those commitments under the JCPOA” and reaffirmed that Iran “shall cooperate fully as the IAEA requests to be able to resolve all outstanding issues, as identified in IAEA reports.”⁴⁰⁶ The Council has also requested the Director General to “provide regular updates to the IAEA Board of Governors and, as appropriate, in parallel to the Security Council on Iran’s implementation of its commitments under the JCPOA.” He is also to report to both

406 UNSC Resolution 2231 (2015), July 20, 2015, para. 3.

bodies “at any time if the Director General has reasonable grounds to believe that there is an issue of concern directly affecting fulfilment of JCPOA commitments.”⁴⁰⁷ This is standard operating procedure so far.

The broad steps to be taken by Iran include the following (for more specifics see JCPOA Annex 1—Nuclear measures):

- a reduction in installed centrifuges
- no enrichment of uranium over 3.67 percent for at least 15 years
- a reduction in holdings of low-enriched uranium (LEU) for 15 years
- placement of all excess centrifuges and enrichment infrastructure in IAEA monitored storage, to be withdrawn only to replace existing equipment
- no new enrichment facilities for 15 years
- conversion of the Fordow enrichment plant to a peaceful uses research and development facility, but not for enrichment
- restrict enrichment at the Natanz plant to first generation (IR-1) centrifuges for ten years and removal of advanced centrifuges in IAEA-monitored storage; limited R&D with advanced centrifuges for ten years according to an agreed schedule
- redesign of the Arak heavy water research reactor so it will not produce weapons-grade plutonium but will support only peaceful nuclear research and radioisotope production; the existing core will be destroyed or removed from Iran; all of the spent fuel to be shipped out of Iran for the reactor’s lifetime
- no accumulation of heavy-water in excess of the needs of the remodeled Arak reactor and no new heavy water reactors to be built for 15 years.

The Agency’s powers and responsibilities will be enhanced, as follows, to permit it to carry out its additional responsibilities:

- regular access to all of Iran’s nuclear facilities (notably daily access to Natanz), including the use of what the April 2015 “parameters” document described as the

⁴⁰⁷ UNSC Resolution 2231 (2015), July 20, 2015, para. 4.

“most up-to-date, modern monitoring equipment”⁴⁰⁸ (the JCPOA specifically mentions on-line-enrichment measurement and electronic seals “which communicate their status within nuclear sites to IAEA inspectors”),

- access to uranium mines and continuous surveillance at uranium mills, where Iran produces yellowcake, for 25 years, and
- continuous surveillance of Iran’s centrifuge rotor and bellows production and storage facilities for 20 years, while its centrifuge manufacturing base will be frozen under continuous surveillance.

Iran will make the necessary arrangements for a long-term IAEA presence, including issuing long-term visas and proper working space at nuclear sites and “with best efforts” at locations near nuclear sites. Iran will also increase the number of IAEA inspectors designated to work in Iran from 130 to 150 within nine months of the implementation of the JCPOA and in general allow the designation of inspectors from states that have diplomatic relations with Iran.⁴⁰⁹

In addition the Agency will have access to a dedicated procurement channel that will be established by the Security Council to monitor and approve, on a case-by-case basis, the supply, sale, or transfer to Iran of certain nuclear-related and dual use materials and technology. This was done in the Iraq case, but the Iranian nuclear program is vastly bigger and more sophisticated than Iraq’s, which in any case was being phased out, not prolonged.

The most politically sensitive and crucial role that the Director General has been assigned by the Security Council and the JCPOA is to submit a report confirming that the IAEA has verified that Iran has taken the actions specified for it in the JCPOA’s Implementation Plan (Annex V) that are intended to limit its nuclear activities for the coming 10–15 years. Iran’s “IAEA-verified implementation” will determine when “Implementation Day” occurs, a key moment since that is when the initial nuclear-related sanctions will be lifted or suspended. This puts enormous responsibility on the shoulders of the IAEA. Notwithstanding the unprecedented detail set out in the JCPOA, there is no such thing as an unambiguous undertaking in the arms control field, no matter how hard negotiators try. The Secretariat will be under great pressure from Iran, China, Russia, and their supporters to give the green light for sanctions to be lifted, while the United States and its allies will be scrutinizing the Agency’s verification activities and compliance assessment and reporting to ensure that they are credible.

⁴⁰⁸ See Text of U.S. Fact Sheet, “Parameters for a Joint Comprehensive Plan of Action Regarding the Islamic Republic of Iran’s Nuclear Program,” (Washington, D.C.: U.S. Department of State, April 2, 2015), and Text of Iran Summary, April 2, 2015, reproduced in *Decoding the Iran Nuclear Deal* (Cambridge, MA: Belfer Center for Science and International Affairs, Harvard Kennedy School, Harvard University, April 2015).

⁴⁰⁹ JCPOA, para. N.67.

Presumably it will be the Board of Governors that will make the determination about Iran's compliance or non-compliance, with a recommendation to the Security Council. As we have seen, the Board may not automatically take its cue from the Secretariat and replicate its non-compliance judgments and language, but it often does. For their part Board members will be looking to the Secretariat to provide a technically credible and politically marketable non-compliance conclusion. As in the past few cases the Secretariat does not necessarily have to invoke the word "non-compliance" in order to convey its message but should certainly indicate clearly where breaches and shortcomings have occurred. The Secretariat's comprehensive verification role and past experience with Iran will surely be influential, but the decisions it makes will certainly be nerve-wracking for the Secretariat and critical to its future credibility.

The Security Council resolution provides for sanctions to "snap back into place" if at any time Iran fails to fulfill its commitments, but this is triggered by a complaint by a JCPOA participant, not by the IAEA (although any party could draw on evidence produced by the IAEA).

Relationship with the JCPOA Joint Commission

Finally, one potentially complicating aspect of the JCPOA for the IAEA is the establishment of a "dispute resolution mechanism," the Joint Commission, on which all of the JCPOA participants are represented. The Commission will enable any JCPOA participant to seek to resolve disagreements about the performance of the JCPOA or if they believe another party is "not meeting its commitments." It is clear this body is empowered to do more than resolve disputes over interpretation of the agreement, as the text specifically mentions referring a case to Foreign Ministers if "the compliance issue had not been resolved."

The Joint Commission is in fact to be used in case of a dispute over IAEA requests for access to locations not declared under the CSA or AP if the Agency has concerns regarding undeclared nuclear materials or activities, or activities "inconsistent with the JCPOA."⁴¹⁰ If the Agency and Iran are unable to reach satisfactory verification arrangements within 14 days of the Agency's request, the issue goes to the Joint Commission which, after up to seven days of consultation, may decide by a vote of five or more of its members to "advise on the necessary means to resolve the IAEA's concerns." Iran would

⁴¹⁰ JCPOA, paras Q.76-78.

then have an additional three days to implement the decision. This is at the heart of the controversial “24 day” period for dispute resolution that critics of the JCPOA have seized on. The disadvantage for the Agency is that it takes the prerogative of deciding a case of non-cooperation away from the Board of Governors (which has no established timeline for dealing with such issues). The advantage for the IAEA is that it immediately engages the authority of the permanent five members of the Security Council, and moreover, makes a quick decision, by vote if necessary, more likely.

A greater danger for the Agency in its verification and compliance role is that Iran could use the Joint Commission to dispute the Secretariat’s non-compliance reports to the Board and Security Council and seek to have it issue contrary conclusions to those recommended by the Director General. Such a body could also be seen as usurping the role of the Board of Governors to direct the verification work of the Agency and to make judgments about non-compliance. The general membership of the Agency could well oppose the actions taken by such an ad hoc outside body, particularly as it is comprised of the most powerful states, whereas the Board is more representative of the Agency’s membership and the international community generally. So far the JCPOA partners have been sensitive about not usurping the Board. Presumably the Joint Commission will only make rulings when all other avenues for resolving a dispute, including the Director General’s own “good offices,” have been exhausted.

Ultimately Iran’s compliance with the JCPOA will depend on whether it has made a strategic decision to do so. If it takes the path of Libya there may be some uncertainties, minor disputes, even inadvertent non-compliance, but in general compliance will be forthcoming. Iran would be wise to work closely with the Safeguards Department if that is its intent. If Iran decides to provide grudging cooperation, undertakes minimal compliance that is close to the fine line of non-compliance, and seeks overall to “game” the system, no amount of finely crafted, technically competent, and politically astute non-compliance reporting by the IAEA Secretariat and Director General will suffice to avoid a crisis.

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Interview with Tariq Rauf, Director, Disarmament, Arms Control and Non-proliferation Programme, Stockholm International Peace Research Institute, June 23, Vienna, 2014.

ANNEX A: THE IAEA'S VERIFICATION SYSTEM

Originally the verification system largely involved reporting by the state concerned, nuclear accountancy measures, and on-site inspections by Agency inspectors to check the validity of the reporting and accounting. At the outset safeguards were only applied to nuclear assistance that the Agency provided to its member states and, at states' request, to bilateral transfers of nuclear technology and material between two or more states. These are referred to as INFCIRC/66-type agreements. Currently they apply to specific materials and facilities in three states—India, Israel, and Pakistan.

In 1970 a significant expansion of the safeguards system occurred when the NPT entered into force. Article III of the treaty placed a legally-binding obligation on each non-nuclear weapon state party to negotiate an agreement with the IAEA for the application of safeguards to all of its nuclear activities. These comprehensive (or full-scope) safeguards agreements, known as INFCIRC/153-type agreements, constitute the vast majority of safeguards agreements in force today. In addition to being a mandatory requirement of NPT membership, they are also required by several nuclear weapon-free zone treaties which rely on the IAEA for verification of their parties' undertakings not to acquire nuclear weapons. From 1993 onwards, as a result of non-compliance by Iraq with its safeguards agreement, a strengthened system was devised which increased the range and type of information the Agency can use to verify compliance and reaffirmed inspectors' authorities. A Model Additional Protocol to comprehensive safeguards agreements was agreed in 1997 which provides even more information and access to the Agency to verify compliance.

The IAEA Statute, and by implication the NPT and the zone treaties, empowers the Agency's Secretariat, the international civil servants who run the Agency headed by a Director General, to manage the safeguards system in accordance with broad policy guidance from the Board of Governors and the full membership assembled in the annual General Conference. The Safeguards Department and its staff, headed by a Deputy Director General, is responsible to the Director General for the day-to-day running of the system. The Department manages all aspects of the verification system, including the policy, conceptual, analytical, and inspection aspects, as well as the reporting function. A key capability is the inspectorate, approximately 250-strong, which conducts on-site inspections on the territory of states.

The safeguards system is the principal—but today not the exclusive—source of information on the basis of which compliance and non-compliance is judged. The Department relies on a variety of techniques, processes and technologies to obtain and analyze such information. To begin with, it receives and analyses declarations and other information from states about their nuclear activities. Such information is considered “safeguards confidential” and not released publicly. State declarations include details of “source” material like uranium; special fissionable material, such as plutonium and enriched uranium; facilities such as nuclear power plants, research reactors, and enrichment and reprocessing installations; and other locations where nuclear material is present. The range of information to be provided by states has expanded since safeguards were strengthened after the Iraq non-compliance case emerged in 1991, especially from states that have concluded an Additional Protocol. Depending on the state and the sophistication of its nuclear enterprise, this information can amount to “cradle to grave” data—from uranium mining at one end of the fuel cycle to disposition of nuclear waste and spent fuel at the other.

Since 1991 the Agency has expanded the sources of information to add to that provided by states in their declarations: this includes information voluntarily provided by states; open source information, including satellite imagery; nuclear trade information; and intelligence information from technically capable member states. The use of intelligence information in particular has opened up a new area of sensitivity in dealing with potential or actual non-compliance. Increasingly the Agency’s inspectors have acquired more intrusive and investigatory powers, such as complementary access under the Additional Protocol. “Special inspections,” broadly equivalent to challenge inspections in other arms control regimes, have been reaffirmed by the Board as an Agency right, although only to be used in rare cases. Increasingly the Agency is deploying remote monitoring technology to supplement (or in some cases supplant) human inspectors for routine monitoring tasks. Environmental sampling is also permissible.

In addition, the strengthened safeguards system has seen the introduction of re-emphasized and entirely new concepts that the Department applies in its verification role. The first is “correctness and completeness,” revived after the Iraq case, to emphasize the Agency is concerned not just with verifying that states’ declarations about their nuclear holdings and activities are correct, but that they are also complete. Verification needs to determine not just that states are declaring all of their peaceful nuclear activities, but also that they are not hiding secret, undeclared materials and facilities. Some of the Agency’s new authorities and technologies are designed to help it detect the existence of undeclared non-compliant activities.

ANNEX B: IAEA REPORTING ON SAFEGUARDS IMPLEMENTATION

(Extract from The Safeguards System of the International Atomic Energy Agency, https://www.iaea.org/safeguards/documents/safeg_system.pdf: accessed 25 May 2015)

The Secretariat reports its verification activities, their results, and conclusions to individual States and to Agency policy-making organs.

Reporting to Individual States

Statements on Nuclear Verification Activities under Safeguards Agreements

For a State with a comprehensive safeguards agreement in force, the Agency is obliged to report formally to the State at intervals specified in the Facility Attachment of the Subsidiary Arrangements (usually after each inspection) on the activities carried out at each facility and their results, including any discrepancies found and whether they have been resolved. This statement on inspection results is generally known as a “90(a) statement” because of the particular paragraph of the text in INFCIRC/153 (Corr.) which refers to such a statement. The Agency also provides a “90(b) statement” on the conclusions it has drawn from its verification activities for each facility over a material balance period. The reporting of results and conclusions of verification activities performed under item-specific safeguards agreements is less detailed and less standardized. After an inspection, a standard letter—referred to as a Safeguards Transfer Agreement (STA) letter—is normally sent to the State in question stating that ‘the inspection disclosed no departure from the terms of the safeguards agreement’. Only if a problem has arisen does the Secretariat notify the State of the need for further information. The results of material balance evaluations and inspection goal attainment are not provided to the State.

Statements under Additional Protocols

Under the complementary access provisions of an additional protocol, the Agency is obliged to send the State a statement on the activities performed during complementary access (generally known as a ‘10.a statement’, referring to the relevant article in the Model Additional Protocol), on the results of activities in respect of questions or inconsistencies

(a ‘10.b statement’), and on conclusions drawn from its activities under the additional protocol (a ‘10.c statement’).

Reporting to Agency Policy-Making Organs

Safeguards Implementation Report (SIR)

As previously stated, the SIR is the main vehicle whereby the Secretariat reports to the Board of Governors, annually, on safeguards implementation in the preceding calendar year. The report includes the Safeguards Statement for the year concerned, in which safeguards conclusions are reported for all States with safeguards agreements in force. It also identifies any instances of a State’s non-compliance with its safeguards agreement. The Safeguards Statement, Background to the Statement and Executive Summary of the SIR are released for publication. The SIR is supported by a Safeguards Technical Report (STR), which provides technical and statistical data on facilities and materials under safeguards. The Secretariat provides the STR to Permanent Missions to the IAEA upon request.

IAEA Annual Report

The Annual Report is submitted by the Board to the General Conference and is subsequently published. The document typically summarizes and highlights developments in major areas of the work of the Agency, including safeguards, and includes a summary of major issues, activities and achievements. The chapter on the Verification Programme contains a summary of the Safeguards implementation activities, and provides safeguard’s related reference material

About the Project on Managing the Atom

The Project on Managing the Atom (MTA) is the Harvard Kennedy School's principal research group on nuclear policy issues. Established in 1996, the purpose of the MTA project is to provide leadership in advancing policy-relevant ideas and analysis for reducing the risks from nuclear and radiological terrorism; stopping nuclear proliferation and reducing nuclear arsenals; lowering the barriers to safe, secure, and peaceful nuclear-energy use; and addressing the connections among these problems. Through its fellows program, the MTA project also helps to prepare the next generation of leaders for work on nuclear policy problems. The MTA project provides its research, analysis, and commentary to policy makers, scholars, journalists, and the public.

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