

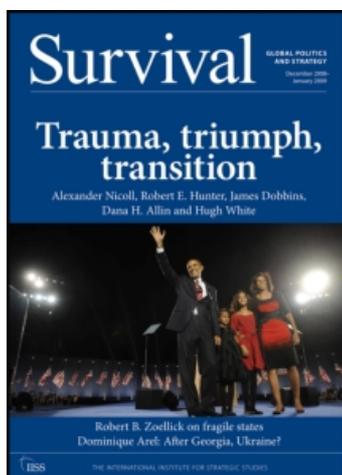
This article was downloaded by:

On: 11 February 2009

Access details: *Access Details: Free Access*

Publisher *Routledge*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Survival

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title-content=t713659919>

Exposing Nuclear Non-compliance

Pierre Goldschmidt

Online Publication Date: 01 February 2009

To cite this Article Goldschmidt, Pierre(2009)'Exposing Nuclear Non-compliance',Survival,51:1,143 — 164

To link to this Article: DOI: 10.1080/00396330902749764

URL: <http://dx.doi.org/10.1080/00396330902749764>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Exposing Nuclear Non-compliance

Pierre Goldschmidt

The nuclear non-proliferation regime, so vital to maintaining international peace and security, is under increasing threat, particularly from countries that deliberately violate their non-proliferation obligations. Experience with North Korea and Iran has demonstrated that non-compliance must be addressed promptly and effectively. Iran has sought to exploit inconsistencies in how the International Atomic Energy Agency (IAEA) reports violations, including its own case and that of Libya, as well as the less worrying but still significant cases of South Korea and Egypt. Clarifying the technical and statutory basis by which the IAEA exposes non-compliance is one immediate way the non-proliferation regime can be strengthened.

It is hard to believe that, more than 35 years after the adoption of the model Comprehensive Safeguards Agreement, the meaning of 'non-compliance' is still uncertain and subject to debate.¹

Over the last few years, several questions have been repeatedly raised: What is non-compliance? How does one distinguish non-compliance from 'minor reporting oversights'? What happens if the 'mistake' is a one-time incident? Who decides that a state is in non-compliance? Were South Korea and Egypt found to be in non-compliance in 2004 and 2005, and if so, why were they not reported to the UN Security Council? It is time for the IAEA Board of Governors to address these questions, set the record straight, and

Pierre Goldschmidt is Non-resident Senior Associate at the Carnegie Endowment for International Peace, and former Deputy Director General of the International Atomic Energy Agency, Head of the Department of Safeguards.

assure that any future non-compliance is recognised and responded to consistently and effectively.

There is a broad consensus that states which violate or withdraw from the Non-Proliferation Treaty should not be allowed to benefit from the nuclear-energy assistance they received (under Article IV) while and because they were a party to the treaty, or to profit from their violation with impunity. It has therefore been recommended² that the Security Council should adopt a generic (non state-specific) and legally binding resolution, under Chapter VII of the UN Charter, stating that if a state notifies its withdrawal from the treaty *after* being found by the agency to be in non-compliance with its safeguards undertakings, such withdrawal notice constitutes a threat to international peace and security and the state in question would have to surrender all materials and equipment it received under its safeguards agreement(s).

I have also suggested that the Security Council should adopt another generic resolution providing that, if a state is found to be in non-compliance and does not fully and proactively cooperate with the IAEA in resolving the issue and taking the necessary corrective actions, the non-compliant state would be obliged to temporarily suspend all sensitive nuclear-fuel-cycle activities (in particular those related to uranium enrichment, spent fuel reprocessing and the separation of plutonium).³

These generic resolutions would not affect states in good standing with their non-proliferation undertakings. It is therefore essential to be clear about what constitutes non-compliance and how the IAEA is to identify and deal with such cases.

Reporting non-compliance

According to Article XII.C of the IAEA Statute, reporting a state to the Security Council for non-compliance with its safeguards undertakings can be seen as a process comprising the following steps, the last three of which can be taken in sequence or simultaneously:

- Step 1: Agency inspectors report any non-compliance to the director general, via the deputy director general for safeguards.

- Step 2: The director general transmits the report to the Board of Governors.
- Step 3: The board makes a formal finding of non-compliance.
- Step 4: The board calls upon the state in question 'to remedy forthwith any non-compliance which it finds to have occurred'.
- Step 5: The board reports the non-compliance to all members and to the Security Council and General Assembly of the United Nations.

Since 2003, the IAEA Secretariat has reported specific cases of non-compliance with safeguards agreements by Iran, Libya, South Korea and Egypt to the board (Step 2). The actions taken by the board in each case were inconsistent and, if they go uncorrected, will create unfortunate precedents.

The case of Iran is particularly relevant. Iran claims that the decision taken by the Board of Governors in February 2006 to report Iran's nuclear issue to the UN Security Council 'had no legal basis and contradicted the IAEA Statute and its practice'.⁴ Iran bases its case on a claim that 'the inspectors have not reached or concluded any "non-compliance"'.⁵ These statements are incorrect,⁶ and need to be rebutted officially, preferably by the IAEA Legal Office. Because no such rebuttal has yet been made, confusion and misunderstandings have arisen due to the language used in reporting the findings made by the IAEA Secretariat. The confusion is compounded by the board's responses to safeguards breaches involving South Korea and Egypt which were effectively cases of non-compliance.

Whether or not the word 'non-compliance' is used in the report transmitted to the board in Step 2 is irrelevant, as demonstrated in the case of Libya, which admitted to working on an undeclared nuclear-weapons programme for many years. This was an indisputable case of non-compliance with Libya's Non-Proliferation Treaty and safeguards undertakings. However, in the director general's report to the board in February 2004, the word 'non-compliance' was not used; rather, it was stated that 'Libya was in breach of its obligation to comply

These statements are incorrect and need official rebuttal

with the provisions of the Safeguards Agreement', which is synonymous.⁷ Certainly to be 'in breach of one's obligations to comply' and to be in 'non-compliance' is a distinction without a difference.

The same language was used in the director general's November 2003 report on Iran, in which he stated that 'in the past, Iran has concealed many aspects of its nuclear activities, with resultant breaches of its obligation to comply with the provisions of the Safeguards Agreement' which 'has given rise to serious concerns'.⁸

The director general's special report on South Korea in November 2004 found that on a number of occasions the country failed to report to the agency experiments and activities involving nuclear material:

- a. Failure to report nuclear material used in evaporation, spectroscopy and enrichment experiments ([atomic vapour laser isotope separation] and chemical exchange) and the associated products;
- b. Failure to report the production, storage and use of [natural uranium] metal and associated process loss of nuclear material, and the production and transfer of waste resulting therefrom;
- c. Failure to report the dissolution of an irradiated mini-assembly and the resulting uranium-plutonium solution, including the production and transfer of waste; and
- d. Failure to report initial design information for the enrichment facilities and updated design information for the facilities involved in the plutonium separation experiment and the conversion to [natural uranium] and [depleted uranium] metal.⁹

In the case of Egypt, the director general's February 2005 report to the board summarised the country's failure to report a number of nuclear material and activities:

- a. Failure to report on its initial inventory imported UF_4 , imported and domestically produced uranium metal, imported thorium compounds, small quantities of domestically produced UO_2 , UO_3 and UF_4 , and a number of unirradiated low enriched and natural uranium fuel rods;

- b. Failure to report the uranyl nitrate and scrap UO₂ pellets, and their use for acceptance testing of the Hydrometallurgy Pilot Plant;
- c. Failure to report the irradiation of small amounts of natural uranium and thorium and their subsequent dissolution in the Nuclear Chemistry Building laboratories, including the production and transfer of waste;
- d. Failure to provide initial design information for the Hydrometallurgy Pilot Plant and the Radioisotope Production Facility, and modified design information for the two reactors.¹⁰

Instead of referring to ‘breaches of its obligation to comply’ as the reports for Iran and Libya did, these reports use the following language: ‘The ROK conducted experiments and activities involving uranium conversion, uranium enrichment and plutonium separation, which it *failed to report* to the Agency *in accordance with its obligation* under its Safeguards Agreement’¹¹ and these failures were ‘a matter of serious concern’.¹² In the case of Egypt, ‘the Agency has identified a number of *failures by Egypt to report* to the Agency *in accordance with its obligations* under its Safeguards Agreement’;¹³ and ‘the repeated failures by Egypt to report nuclear material and facilities to the Agency in a timely manner are *a matter of concern*’.¹⁴

The question has therefore been raised about exactly what constitutes non-compliance under Article XII.C of the IAEA Statute. Clearly a failure to declare nuclear material and activities that should be subject to IAEA safeguards cannot be considered a small, technical reporting mistake. If such failures have taken place over an extended period of time or were deliberately concealed they must be categorised as non-compliance. If these activities had a plausible military purpose or involved military organisations then they are an even greater matter of concern. The same is true if the non-compliant state does not fully and actively cooperate with the IAEA to remedy the situation.

Without attempting to be exhaustive, the following are clear cases of non-compliance under the Comprehensive Safeguards Agreement (especially if they are combined):

- ‘Diversion of nuclear material from declared nuclear activities, or the failure to declare nuclear material required to be placed

- under safeguards'¹⁵ (for example not declaring nuclear material in the initial inventory or imported thereafter).
- Undeclared production of nuclear material (for example through irradiation).
 - Undeclared use of exempted nuclear material in a nuclear facility.
 - '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'.¹⁶
 - Starting the construction¹⁷ or modifying the design of a nuclear facility without informing the agency.

When an Additional Protocol is in force, many more actions would constitute non-compliance, such as 'the failure to declare nuclear material, nuclear activities or nuclear related activities required to be declared under Article 2' or 'the undeclared manufacture of items referred to in Annex I' of the Additional Protocol.¹⁸

The non-proliferation regime would be significantly strengthened if the board were to confirm that any state-specific report on safeguards implementation (beyond the annual Safeguards Implementation Report¹⁹), transmitted by the director general to the board, is to be considered, unless explicitly stated otherwise, as a report of non-compliance (or a progress report on verification activities following a case of non-compliance).

Aside from clear cases of non-compliance, the extent to which an accumulation of safeguards-implementation problems – such as delayed provision of access to nuclear material or facilities, material unaccounted for, open questions and unresolved inconsistencies, inconclusive containment and surveillance results, and lack of cooperation with the agency – justifies a state-specific report to the board should be left to the judgement, and is the responsibility of, the IAEA Department of Safeguards and the director general. However, the board could insist that all such problems be reported in a sufficiently transparent way in the Safeguards Implementation Report. This could include the names of the states where such problems have occurred without being resolved in a timely manner. It would allow the

board, if it deems necessary, to request more information from the secretariat on any specific case of potential proliferation concern.

Where the director general has reported a case of technical and legal non-compliance, the board is not obliged to make a formal finding of non-compliance if it judges the circumstances to not warrant it. If the board does decide to confirm its finding (Step 3) that the state under review is in non-compliance with its safeguards undertakings, it will normally do so by adopting a state-specific resolution. Accordingly, in a March 2004 resolution the board declared Libya to be in non-compliance and requested the director general to report the matter to the Security Council (Step 5), and in a September 2005 resolution declared Iran to be in non-compliance.²⁰ Both resolutions referred to Article XII.C of the IAEA Statute, while the resolution concerning Iran also referred to Article III.B.4.²¹ In the cases of South Korea and Egypt the board did not adopt resolutions nor formally declare either state to be in non-compliance. In each case, it endorsed a 'Chairman's Conclusion' summarising the board's discussion of the issue and encouraging the states to continue their active cooperation with the agency.

In practice, reporting a state to the Security Council is achieved through a board resolution requesting the director general, on behalf of the board, to transmit the resolution to all members, the UN Security Council and the UN General Assembly. However, the board has total freedom in formulating the resolution as it deems appropriate. With

regard to the timing of Step 5, the board is obliged to report a finding of non-compliance to the Security Council, but the Statute does not specify a time limit for the board to do so. For instance, when the board adopted a resolution in September 2005 finding Iran to be in 'non-compliance in the context of Article XII.C of the Agency's Statute' it also stated that 'the Board will address the timing and content of the report required under Article XII.C and the notification required under Article III.B.4'.²²

The main reason the board did not report Iran to the Security Council in November 2003 (when the director general submitted a comprehensive and damning report) was that Iran had informed the agency on 10 November

*The board
has total
freedom in
formulating a
resolution*

2003 (the day the director general's report was issued) that it had agreed to sign the Additional Protocol (which it did on 18 December 2003) and to suspend all enrichment-related and reprocessing activities, not to produce feed material for enrichment processes and not to import enrichment-related items.²³ On 21 October 2003, the foreign ministers of France, Germany and the United Kingdom (the E3) had visited Iran to discuss the nuclear issue. At the end of that visit Iran had agreed to cooperate fully with the IAEA to settle all outstanding issues and to correct any failures to comply with its safeguards agreement. To that end, Iran announced its willingness to sign an Additional Protocol and to commence the ratification process. Iran also agreed to 'voluntarily suspend all uranium enrichment and reprocessing activities as defined by the IAEA'. On their part, the three European foreign ministers informed 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'.²⁴ This sentence was understood as meaning that if Iran complied with its commitments the E3 would not seek Iran's referral to the Security Council at the November meeting of the board.

In the case of Libya, the resolution adopted in March 2004 by the board requested the director general 'to report the matter to the Security Council *for information purposes only*, while commending [Libya] for the actions it has taken to date, and has agreed to take, to remedy the non-compliance' (emphasis added). The Security Council held a meeting on 22 April 2004 to consider the matter, and its president made a statement on behalf of the council welcoming Libya's active cooperation with the IAEA and its decision to abandon its weapons of mass destruction programmes.²⁵

This was a clear demonstration that reporting non-compliance to the board, and subsequently to the Security Council, does not necessarily entail sanctions of any kind. Quite the contrary:

- In April 2004 the United States terminated the applicability of the Iran–Libya Sanction Act to Libya.
- In July 2004 Libya re-established its diplomatic presence in Washington.

- In June 2005, France became the first nuclear-weapon state to consider civilian nuclear cooperation with Libya. The scope of such an agreement mainly involved the reactivation of Libya's Tajura nuclear research reactor. In July 2007, a Memorandum of Understanding was signed envisioning collaboration on a desalination plant with one or more French nuclear reactors as well as support in exploration for and production of uranium. An agreement was signed in a meeting held in December 2007.²⁶
- In June 2006 the United States formally rescinded Libya's designation as a state sponsor of terrorism.
- In January 2008 Libya took its seat as a member of the UN Security Council.

Finally, the IAEA September 2008 report on Libya states that, since the disclosure in December 2003 of its undeclared nuclear activities, 'Libya has provided the Agency unrestricted and prompt access, *beyond that required under its Safeguards Agreement and Additional Protocol*, to those locations, information and individuals deemed necessary by the Agency to fulfil its verification requirement'. The report then concludes that 'the Agency, in accordance with its procedures and practices, will *continue* to implement safeguards in Libya *as a routine matter*'.²⁷

Some member states may object to the proposal that any state-specific report by the director general to the board is (unless explicitly stated otherwise) automatically deemed to be a report on non-compliance, because the IAEA Secretariat might then be less likely to report in that way any serious breach to the board, but would opt to report these breaches in a less transparent and detailed manner in the annual Safeguards Implementation Report. Yet the risk that the secretariat would downplay material failures by any state to comply with its safeguards undertakings seems very low for several reasons. First, although in some cases there will inevitably be a question of judgement about whether or not to report failures and breaches in a state-specific report to the board, the secretariat cannot, and will not, take the risk of covering up a situation that might turn out, later on, to have been an indication of undeclared nuclear activities, thereby undermining

the credibility of IAEA safeguards. Secondly, as demonstrated in the Libyan case, the secretariat and the board can qualify the non-compliance as they deem appropriate, taking into account corrective actions taken and cooperation provided by the state under review. In particular, the board can decide, as with Libya, to report the matter to the Security Council 'for information purposes only' with no negative consequence for the state in question.

Two unfortunate precedents

On 26 November 2004, the board decided not to adopt a resolution on South Korea and, therefore, not to report the case to the Security Council, setting an unfortunate precedent motivated at least in part by political considerations. Nevertheless, the chairman of the IAEA Board concluded that 'the Board shared the Director General's view that given the nature of the nuclear activities described in his report, the failure of the Republic of Korea to report these activities in accordance with its safeguards agreements is of *serious concern*'.²⁸ Since the board is obliged to report any case of non-compliance to the Security Council, not doing so in the case of South Korea could be interpreted as meaning that the board did not consider the breaches to constitute non-compliance with Comprehensive Safeguards Agreements.

Among the reasons for not reporting South Korea to the Security Council, one can highlight the fact that Seoul took the initiative of informing the secretariat that it had discovered, in June 2004, in connection with the submission of its initial declaration pursuant to the Additional Protocol, that laboratory-scale experiments had been carried out by scientists at the Korea Atomic Energy Research Institute (KAERI) in Daejeon. South Korean officials subsequently launched a major diplomatic offensive insisting that the government was not aware of, and did not authorise, these experiments. According to the chairman, 'the Board welcomed the corrective actions taken by the Republic of Korea, and the active cooperation it has provided to the Agency' in providing timely information and access to personnel and locations. Moreover, 'the Board noted that the quantities of nuclear material involved have not been significant, and that to date there is no indication that undeclared experiments have continued'.²⁹ Political considerations also

played a dominant role in the board's decision. At the time, the much more severe violations committed by Iran had not yet been formally declared by the board to constitute non-compliance,³⁰ and reporting South Korea would have been politically embarrassing since Seoul was a member of the Six-Party Talks underway to resolve the crisis created by North Korea's (the Democratic Peoples' Republic of Korea, DPRK) withdrawal from the Non-Proliferation Treaty in January 2003.

Thanks to Seoul's full cooperation in implementing the Additional Protocol, the secretariat was able to report in the Safeguards Implementation Report for 2007 that it had found no indication of the diversion of declared nuclear material from peaceful activities and no indication of undeclared nuclear material or activities. The secretariat has concluded that *all* nuclear material in South Korea remained in peaceful activities.³¹

It is clear, nonetheless, that South Korea was in non-compliance with its safeguards agreement since, in addition to the failures already mentioned, the November 2004 report to the board clearly shows that a number of sensitive activities involving undeclared nuclear material had taken place over an extended period of time and that South Korea initially took some actions which could be interpreted as attempts to conceal past failures.³²

In the case of Egypt, in his February 2005 report to the board the director general stated that 'to date, the Agency has identified a number of failures by Egypt to report to the Agency in accordance with its obligations under its Safeguards Agreement' and concluded that

the research and development activities referred to in this report were the subject of [Egyptian Atomic Energy Authority] and other scientific publications. Notwithstanding, and irrespective of the current status of the previously undeclared activities and the small amounts of nuclear material involved, the repeated failures by Egypt to report nuclear material and facilities to the Agency in a timely manner *are a matter of concern*.³³

Nevertheless, the board decided neither to adopt a resolution nor to report the matter to the Security Council, and did not request that the report be made public, as had been done in the case of South Korea.

In its decision not to report Egypt to the Security Council, it is likely that the board took into account the South Korean precedent, its wish not to put Egypt in the same category as Iran, Egypt's cooperation with the agency, and the corrective actions it had already taken. In addition, it seems that the board considered that the nature of the undeclared activities described in the director general's report was not a matter of proliferation concern, taking into account that some of these activities had been the subject of open-source publications, that some of the activities took place 15–40 years earlier and that the amount of undeclared nuclear material involved was small.

None of these possible justifications can be considered satisfactory. Indeed, many of the undeclared activities referred to in the report are of a sensitive nature, since they include the irradiation of uranium and thorium targets dissolved in three laboratories that had not been declared to the agency. Moreover, Egypt failed to declare imported un-irradiated fuel rods containing uranium enriched to 10% U-235, some of which had been used in undeclared fuel-dissolution experiments, said to have been carried out prior to entry into force of Egypt's safeguards agreement. The fact that some (but not all) of the undeclared activities were the subject of open-source publications cannot be a valid justification for not reporting them to the agency. Otherwise, the mere publication somewhere of something about nuclear experiments by a state engaged in clandestine nuclear activities would permit that state to claim a 'minor reporting oversight' whenever such activities were discovered.

Although some of the undeclared experiments took place decades ago, the uranium and thorium irradiation and dissolution experiments were conducted between 1990 and 2003 (about when the agency started its investigation). It would have been as accurate to say that Egypt has used undeclared nuclear material in undeclared activities over a period of more than 20 years as to say that the country's undeclared activities were minor because some took place so long ago.

That Egypt failed to declare 67kg of imported uranium tetrafluoride (UF₄), 3kg of uranium metal, 9.5kg of imported thorium compounds, un-irradiated fuel rods containing 10% enriched U-235, and irradiation and

dissolution experiments should not be considered a 'minor breach' of its safeguards agreement. These activities are highly significant, and treating them as minor would set a detrimental new standard. Iran used 'only' 1.6kg uranium hexafluoride (UF₆) for testing centrifuges at Kalaye Electric, and used about 400kg of UF₄, 400kg of uranium dioxide (UO₂) and 30kg of uranium metal in a number of undeclared experiments, which were not considered trivial by the board although the quantities involved could also be considered 'small'.

The IAEA Annual Report for 2004 mentions with regard to Egypt that 'in 2004, the Agency identified several open-source documents, which indicated the possibility of hitherto unreported nuclear material, activities and facilities in that State', and that 'at the end of 2004, the Agency was still in the process of verifying the correctness and completeness of Egypt's declarations'.³⁴ Although a full report on Egypt was submitted to the board in February 2005, there is no mention of Egypt in the IAEA Annual Report for 2005, or in any later one, and then not even in the Safeguards Implementation Report for 2007, giving the false impression that this issue had been resolved.³⁵

The cases of Egypt and Iran are very different, in particular because for Egypt (and South Korea) there was no indication of military involvement and no grounds for concluding that there had been a systematic effort to evade safeguards obligations or that a policy of concealment had existed. But there is a danger of setting bad precedents based on arbitrary criteria or judgements informed by political considerations. For its part, according to the agency, 'Egypt has explained that its past failure to report was attributable to a lack of clarity about its obligations under its safeguards agreement, particularly as regards small quantities of nuclear material used in research and development activities'.³⁶ After the extensive reporting on Iran and Libya this appears to be a weak excuse, and such undeclared nuclear material and activities constitute clear cases of non-compliance.

It would also be a major mistake for member states to consider that because all the undeclared activities uncovered by the IAEA in Egypt are

There is a danger of setting bad precedents

permissible under the Non-Proliferation Treaty if declared and placed under safeguards, they should not be a matter of concern. Such a conclusion would negate the whole purpose of comprehensive safeguards agreements. It is true that, taken individually, the failures committed by Egypt would most likely not justify being reported to the board outside the annual Safeguards Implementation Report. However, because of their number and the extended period over which these failures have taken place, a special report to the board was justified.

The dilemma for the board is to decide whether or not these failures constitute non-compliance under Article XII.C of the Statute. From a technical and legal point of view there is no doubt that this is indeed the case. If the board, however, considers that more information is necessary to make such a finding, it should have long since requested the director general to provide an update of his February 2005 report. It is now almost four years since it was reported that 'the Agency's verification of the correctness and completeness of Egypt's declarations is ongoing, pending further results of environmental and destructive sampling analyses and the Agency's analysis of the additional information provided by Egypt'.³⁷

Can the damage be repaired?

To repair the damage done by not reporting non-compliance by South Korea and Egypt to the Security Council, the board should decide that, from now on, any state-specific report by the IAEA Secretariat to the board on safeguards-implementation issues, unless the report explicitly states otherwise, shall henceforth be deemed to be a report of non-compliance (or a progress report on verification activities following a case of non-compliance), whether or not the words 'non-compliance' are used in the report. For example, the most recent report on the implementation of safeguards in Syria³⁸ could be considered a report of non-compliance as foreseen under Article 19 of the safeguards agreement,³⁹ since Syria denied the agency the requested access to locations, documentation and information, preventing the agency from carrying out without delay its verification activities, including the determination of the origin of the anthropogenic natural-uranium particles found at the Dair Alzour site. Moreover, Syria undertook

possible concealment activities such as large-scale clearing, levelling and landscaping operations and the removal of large containers shortly after the agency's request for access.

If the secretariat considered the information available and Syria's refusal of access to a number of suspected locations insufficient to constitute non-compliance, the final section of the report to the board relating to the 'Current Assessment' could have included a paragraph stating that the present report was not a report of non-compliance by Syria with its safeguards obligations but on a possible case of non-compliance that must be verified without further delay by the agency.

The agency has the legal authority, under INFCIRC/153-type safeguards agreements, 'to conduct special inspections insofar as these relate to the verification of the existence or non-existence of undeclared activities'.⁴⁰ The board should have adopted a resolution in November 2008 requiring Syria to provide immediate access to all relevant information, documentation and locations and specifying that if it did not comply within 30 days, the board, acting under Article 18 of Syria's safeguards agreement, would request the director general to make a special inspection as provided under Article 73 of Syria's safeguards agreement.⁴¹ As the director general stated in January 1992, the agency has 'the authority, under the Statute and under comprehensive safeguards agreements concluded with it, to request special inspections at undeclared sites'.⁴² In any case, 'in considering a question of non-compliance, the Board might, on its own initiative, conclude that the circumstances warrant a special inspection'.⁴³

Independently of the decision of principle to consider state-specific safeguards reports as reports of non-compliance, the board should bring the South Korean and Egyptian cases into conformity with this new standard. The board should therefore adopt a resolution acknowledging that the failure by Seoul to declare a number of experiments and activities involving nuclear material as reported to the board in November 2004 constitutes non-compliance with its safeguards agreement (in the context of Article XII.C of the Statute), commending South Korea for its cooperation with the agency in providing access to information, documents, persons and locations, welcoming the fact that all nuclear material in South Korea remained

in peaceful activities, and requesting the director general to report this resolution and all reports and chairman's conclusions relating to South Korea to the Security Council for information purposes only.⁴⁴

Similarly, the board should adopt a resolution acknowledging that Egypt's failure to report a number of nuclear materials and activities, as reported by the board in February 2005, constitutes non-compliance with its safeguards agreement (in the context of Article XII.C of the Statute), commending Egypt for its cooperation with the agency, underlining the necessity for Egypt to sign and ratify the Additional Protocol promptly and, in the meantime, to fully implement its provisions on a voluntary basis at least until such time as the IAEA Secretariat has concluded that Egypt's declarations are correct and complete.⁴⁵ The board resolution should also request the director general to report this resolution and all reports and chairman's conclusions relating to Egypt to the Security Council for information purposes only, and to provide an updated report on its verification findings in Egypt.

Finally, the board should request the secretariat to report more explicitly on borderline cases in the annual Safeguards Implementation Report, with the names of the states concerned and a description of the difficulties faced in implementing its verification activities or any finding that may potentially raise proliferation concerns. Experience has shown that disclosure in this report of the names of states that are not fully cooperating with the secretariat has often had a positive effect.⁴⁶ This practice should be continued and expanded. It would allow the board, if it deems necessary, to request more information from the secretariat on any specific case of possible proliferation concern.

* * *

In 2005 the IAEA was awarded the Nobel Peace Prize, to a large extent in recognition of its objectivity and impartiality when dealing with nuclear non-proliferation issues. In light of the irreplaceable role of the IAEA in this domain it is crucial that its reputation and the credibility of the safeguards regime be maintained. It is therefore necessary for the agency to formally

acknowledge that in the past some of its decisions have created potentially damaging precedents that need to be corrected to avoid any impression that the implementation of the IAEA Statute is selective. Member states have repeatedly insisted that 'measures to strengthen the effectiveness and improve the efficiency of the safeguards system with a view to detecting undeclared nuclear material and activities must be implemented rapidly by all concerned States'.⁴⁷ The Board of Governors will go a long way towards achieving this goal if it can demonstrate through its actions that it will not shirk its responsibilities when it comes to non-compliance with safeguards agreements.

Acknowledgements

The views expressed herein are those of the author only.

Notes

- 1 For the Comprehensive Safeguards Agreement see 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), June 1972. For the Additional Protocol, see 'Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards', INFCIRC/540 (Corrected), <http://www.iaea.org/Publications/Documents/Infcircs/1997/infcirc540c.pdf>.
- 2 See, for example, George Perkovich, Jessica T. Matthews, Joseph Cirincione, Rose Gottemoeller and Jon B. Wolfsthal, *Universal Compliance: A Strategy for Nuclear Security* (Washington DC: Carnegie Endowment for International Peace, 2005), <http://www.carnegieendowment.org/files/UC2.FINAL3.pdf>, and Pierre Goldschmidt, 'Priority Steps to Strengthen the Nonproliferation Regime', Carnegie Endowment, Policy Outlook no. 33, February 2007, http://www.carnegieendowment.org/files/goldschmidt_priority_steps_final.pdf.
- 3 See, for example, Pierre Goldschmidt, 'The Increasing Risk of Nuclear Proliferation: Addressing the Challenge', Belgian Nuclear Society Symposium, Brussels, 26 November 2003, <http://www.iaea.or.at/PrinterFriendly/NewsCenter/Statements/DDGs/2003/goldschmidt26112003.html>, and Pierre Goldschmidt, 'IAEA Safeguards: Dealing Preventively with Non-compliance', Carnegie Endowment for International Peace, 12 July 2008, http://www.carnegieendowment.org/files/Goldschmidt_Dealing_Preventively_7-12-08.pdf.

- ⁴ See, for example, the statement by Reza Aghazadeh, Iran's vice president and president of the Atomic Energy Organisation of Iran, at the IAEA General Conference, 18–22 September 2006.
- ⁵ Letter from H.E. Ambassador Dr Soltanieh to the Director General of the IAEA, GOV/INF/2007/8.
- ⁶ Referring Iran to the Security Council was consistent with Articles XII.C and III.B.4 of the IAEA Statute and with its practice as demonstrated by the referral of Libya to the Security Council in 2004 on the basis of a report that did not use the word 'non-compliance'. Iran was clearly in non-compliance through failure, over many years, to declare all nuclear material and activities that should have been subject to safeguards, in circumstances where a military purpose was plausible; see Pierre Goldschmidt, 'Rule of Law, Politics and Nuclear Non-proliferation', presentation to the Ecole Internationale de Droit Nucléaire, Université de Montpellier, 7 September 2007, <http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=19564&prog=zgp&proj=znpp>.
- ⁷ IAEA, 'Implementation of the NPT Safeguards Agreement of the Socialist People's Libyan Arab Jamahiriya', Report by the Director General, 20 February 2004, GOV/2004/12, <http://www.iaea.org/Publications/Documents/Board/2004/gov2004-12.pdf>.
- ⁸ IAEA, 'Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran', Report by the Director General, 10 November 2003, GOV/2003/75, <http://www.iaea.org/Publications/Documents/Board/2003/gov2003-75.pdf>.
- ⁹ IAEA, 'Implementation of the NPT Safeguards Agreement in the Republic of Korea', Report by the Director General, 11 November 2004, GOV/2004/84, para. 38, <http://www.iaea.org/Publications/Documents/Board/2004/gov2004-84.pdf>.
- ¹⁰ IAEA, 'Implementation of the NPT Safeguards Agreement in the Arab Republic of Egypt', Report by the Director General, 14 February 2005, GOV/2005/9, para. 22, available at <http://www.carnegieendowment.org/static/npp/reports/gov2005-9.pdf>.
- ¹¹ IAEA, 'Implementation of the NPT Safeguards Agreement in the Republic of Korea', GOV/2004/84, para. 38 (emphasis added).
- ¹² *Ibid.*, para. 41.
- ¹³ IAEA, 'Implementation of the NPT Safeguards Agreement in the Arab Republic of Egypt', GOV/2005/9, para. 22 (emphasis added).
- ¹⁴ *Ibid.*, para. 23 (emphasis added).
- ¹⁵ IAEA *Safeguards Glossary*, 2001 ed., International Nuclear Verification Series no. 3, section 2.2(d), <http://www-pub.iaea.org/MTCD/publications/PDF/nvs-3-cd/Start.pdf>.
- ¹⁶ *Ibid.*
- ¹⁷ If a so-called revised Code 3.1 provision has been agreed to under the Subsidiary Arrangements concluded with the agency.
- ¹⁸ IAEA *Safeguards Glossary*.
- ¹⁹ The Safeguards Implementation Report, submitted every year to the board, provides a description and analysis of the agency's safeguards operations during the previous year,

including a summary of the problems encountered and the secretariat's findings and conclusions. Distribution of the full report is restricted to IAEA member states and it is not available to the general public.

- 20 IAEA, 'Implementation of the NPT Safeguards Agreement of the Socialist People's Libyan Arab Jamahiriya', Resolution adopted by the Board on 10 March 2004, GOV/2004/18, <http://www.iaea.org/Publications/Documents/Board/2004/gov2004-18.pdf>; IAEA, 'Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran', Resolution adopted on 24 September 2005, GOV/2005/77, <http://www.iaea.org/Publications/Documents/Board/2005/gov2005-77.pdf>.
- 21 Article III.B.4 states that 'if in connection with the activities of the Agency there should 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'.
- 22 IAEA, 'Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran', GOV/2005/77.
- 23 The commitment not to produce feed material was important because without it Iran could not produce low- or highly enriched uranium domestically. However, in summer 2004 Iran notified the agency that it intended to resume enrichment-related activities and the production of UF₆ as feedstock.
- 24 'Statement by the Iranian Government and visiting EU Foreign Ministers', *In Focus: IAEA and Iran*, 21 October 2003, http://www.iaea.org/NewsCenter/Focus/IaeaIran/state-ment_iran21102003.shtml.
- 25 UN Security Council, 'Statement by the President of the Security Council', 22 April 2004, S/PRST/2004/10, available at <http://www.unhcr.org/refworld/pdfid/411728c84.pdf>.
- 26 Ann MacLachlan, 'France, Libya Initial Nuclear Pact, Emphasize Infrastructure-Building', *Nuclear Fuel*, vol. 48, no. 50, 13 December 2007, p. 15.
- 27 IAEA, 'Implementation of the NPT Safeguards Agreement in the Socialist People's Libyan Arab Jamahiriya', Report by the Director General, 12 September 2008, GOV/2008/39, <http://www.iaea.org/Publications/Documents/Board/2008/gov2008-39.pdf> (emphasis added). Such a conclusion raises some questions. First, the word 'continue' seems to imply that in the past the agency has implemented safeguards in Libya as a routine matter. This is not the case, since, as indicated in the report to the board, the agency had 'unrestricted and prompt access, *beyond* that required under its Safeguards Agreement and Additional Protocol, to those locations, information and individuals deemed necessary by the Agency to fulfil its verification requirements'. And secondly, why does the agency feel it necessary to officially state *now* that it will implement safeguards in Libya as a routine matter when the report acknowledges that there are still some unresolved issues such as the origin of 2 tonnes of UF₆ as well as other uranium compounds obtained

- through a clandestine source, that 'there are some parts of Libya's past programme which the Agency has not been able to reconstruct fully' and that the agency still needs to 'work to reach a conclusion about the absence of undeclared nuclear material and activities in Libya'? The adoption by the board, on 24 September 2008, of a resolution supporting the continued implementation of safeguards in Libya 'as a routine matter' thus constitutes another detrimental precedent.
- ²⁸ IAEA, 'IAEA Board Concludes Consideration of Safeguards in South Korea', staff report, 26 November 2004, http://www.iaea.org/NewsCenter/News/2004/south_korea.html (emphasis added).
- ²⁹ *Ibid.*
- ³⁰ This was done only on 24 September 2005 and it was not until 4 February 2006 that the board decided to report the matter to the UN Security Council.
- ³¹ Such a conclusion means that 'the Secretariat has found no indication that, in its judgement, would give rise to a possible proliferation concern'. IAEA, 'Safeguards Statement for 2007', para. 13, <http://www.iaea.org/OurWork/SV/Safeguards/es2007.html>.
- ³² At least ten AVLIS-related experiments involving exempted or undeclared nuclear material were carried out between 1993 and 2000 (IAEA, 'Implementation of the NPT Safeguards Agreement in the Republic of Korea', GOV/2004/84, para. 15). In 2002 and 2003 South Korea refused requests by the agency to visit KAERI's Laser Technology Center (para. 14); it refused to acknowledge in 1999 having conducted plutonium separation experiments (para. 26); and it did not report in August 2004 all past conversion activities (para. 20).
- ³³ IAEA, 'Implementation of the NPT Safeguards Agreement in the Arab Republic of Egypt', GOV/2005/9 (emphasis added).
- ³⁴ IAEA, *Annual Report for 2004* (Geneva: IAEA, 2005), p. 65, <http://www.iaea.org/Publications/Reports/Anrep2004/safeguards.pdf>.
- ³⁵ The February 2005 report to the Board (IAEA, 'Implementation of the NPT Safeguards Agreement in the Arab Republic of Egypt', GOV/2005/9, para. 26) states 'The Director General will continue to report to the Board of Governors on the implementation of safeguards in Egypt as appropriate'.
- ³⁶ *Ibid.*, para. 23.
- ³⁷ IAEA, 'Implementation of the NPT Safeguards Agreement in the Arab Republic of Egypt', GOV/2005/9, para.24.
- ³⁸ IAEA, 'Implementation of the NPT Safeguards Agreement in the Syrian Arab Republic', Report by the Director General, 19 November 2008, http://www.isis-online.org/publications/syria/IAEA_Report_Syria_19Nov2008.pdf.
- ³⁹ Paragraph 19 of 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, provides that '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 ... to nuclear weapons or other

nuclear explosive device, it may make the reports provided for in paragraph C of Article XII of the Statute' including a report of non-compliance to the UN Security Council.

- 40 IAEA, 'Strengthening of Agency Safeguards: Special Inspections', 12 November 1991, GOV/2554 Attachment 1, para. 4.
- 41 Article 18 provides that if the board 'decides that an action by the State is essential and urgent in order to ensure verification that nuclear material ... is not diverted to nuclear weapons ... the Board shall be able to call upon the State to take the required actions without delay'.
- 42 IAEA, 'Excerpts from Statements made by the Director General under the Agenda item "Strengthening of Agency Safeguards" at the Board's December 1991 Meetings', 22 January 1992, GOV/INF/646, Attachment 1, para. 139.
- 43 IAEA, 'Strengthening of Agency Safeguards: Special Inspections', 12 November 1991, GOV/2554 Attachment 1, para. 14.
- 44 The secretariat concluded that all nuclear material in South Korea remained in peaceful activities after 'the Agency was able to clarify all issues relating to past undeclared activities'. IAEA, 'Safeguards Statement for 2007', para. 33. How the secretariat reached this important conclusion after the failures and breaches reported to the board in November 2004 (IAEA, 'Implementation of the NPT Safeguards Agreement in the Republic of Korea', GOV/2004/84) is described in Appendix I of the Safeguards Implementation Report for 2007. The latter is unfortunately not publicly available and should be made part of the reports transmitted to the Security Council.
- 45 Egypt should consider the merit of spontaneously agreeing to implement on a voluntary basis the Additional Protocol until such time the secretariat has concluded that Egypt's declarations are correct and complete and that there is no undeclared nuclear material and activities in Egypt. Such a commitment, while not departing from Egypt's principle decision not to sign and ratify at this stage the Additional Protocol, would make it clear that its principle decision is in no way intended to prevent the agency from drawing the necessary conclusion mentioned above, thereby distancing itself further from Iran's behaviour.
- 46 For instance, the Safeguards Implementation Report for 2000 reported that, by the end of that year, all states with facilities containing safeguarded nuclear material, except five which were named, had agreed to provide early design information on new facilities. One year later all had done so except Iran, which adapted its subsidiary arrangements accordingly in February 2003. The report for 2002 named four states which had not ratified their Additional Protocol more than five years after signature. Three of them did so within one year of the review of the report by the board.
- 47 IAEA General Conference resolution adopted on 4 October 2008, GC(52)/RES/13, http://www.iaea.org/About/Policy/GC/GC52/GC52Resolutions/English/gc52res-13_en.pdf.

