



WORLD INSTITUTE FOR
NUCLEAR SECURITY

FACILITATING ACCOUNTABILITY FOR NUCLEAR SECURITY:

A NATIONAL LEVEL MODEL FOR INTERNAL AND INTERNATIONAL ASSURANCES

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I. INTERNATIONAL ASSURANCES AND THE NUCLEAR SECURITY REGIME

Nuclear security¹—and international efforts to strengthen it—has a higher profile than ever before. The 2010 and 2012 Nuclear Security Summits have facilitated significant progress in securing vulnerable nuclear materials, strengthening the international legal framework, and improving States’ internal and cooperative capabilities in addressing the threat. However, sustained momentum to strengthen the global nuclear security regime has not yet produced a coherent system with which to secure and control all nuclear materials. A patchwork of binding and non-binding agreements, guidelines, best practices and multilateral engagement mechanisms provides a basis for national efforts to establish and regulate nuclear security, but key gaps and limitations undermine confidence in the effectiveness of the system as a whole. In particular, a lack of details about the security measures States have taken makes it impossible to assess their effectiveness and hold them accountable for their security responsibilities.

Individual States have the responsibility to establish, implement, maintain and sustain a nuclear security system. Because a security incident involving nuclear or other radioactive material could have serious consequences beyond a State’s borders, ensuring the effectiveness of nuclear security practices is both a national interest and an international responsibility. In fulfilling this responsibility, it is not sufficient for governments to rely on secrecy and simply say, “Trust us.” States need to engage with the international community to demonstrate their own security performance.

Most State participants in the 2012 Nuclear Security Summit released national progress reports on their nuclear security activities. Although these reports did provide some insights into States’ political commitments to improving nuclear security, they lacked information about the effectiveness of States’ nuclear security regimes. If States were to take measures to demonstrate that their national efforts were consistent with international guidelines, recommendations and best practices for effective nuclear security, the international community would have more confidence that nuclear materials and facilities are secure.

Within the context of the 2014 Nuclear Security Summit preparations, support is growing for the idea that States should provide “assurances” to each other about their security practices. However, confusion remains about what is meant by “assurances” in a nuclear security context. The concept of “assurances” can be understood as actions or information shared through a mechanism established for the purposes of providing confidence. Assurance is the outcome of demonstrating openness, accountability, and effectiveness through such a mechanism.

International assurances can be understood as activities and information-sharing designed to promote confidence among States and the international community while protecting sensitive information about materials and facilities. As a result of the Global Dialogue on Nuclear Security Priorities² process and sous-Sherpa preparatory meetings in advance of the 2014 Nuclear Security Summit, a working definition of international assurances for nuclear security has been proposed as:

Activities undertaken, information shared, or measures implemented voluntarily by a State or other

1. This paper adopts the specific meaning of nuclear security endorsed by the IAEA in Nuclear Security Fundamentals No. 20, Objective and Essential Elements of a State’s Nuclear Security Regime (2013), that “Nuclear security focuses on the prevention of, detection of, and response to, criminal or intentional unauthorised acts involving or directed at nuclear material, other radioactive material, associated facilities, or associated activities.”

2. Through the Global Dialogue on Nuclear Security Priorities, leading government officials, international experts and nuclear security practitioners engage in a collaborative process to build consensus about the need for a strengthened global nuclear security system, how it would look and what actions would be needed at the 2014 Nuclear Security Summit and beyond. For more information: www.nti.org/about/projects/global-dialogue-nuclear-security-priorities.

*stakeholders that provide confidence to others (other governments, a designated international organisation, the public, etc.) of the effectiveness of nuclear security within a given state.*³

Such a definition captures a wide range of activities and information-sharing that can take place at internal, bilateral or multilateral levels.

Outstanding questions about international assurance mechanisms include:

- What kind of information and activities would build confidence amongst the international community that a State has its nuclear materials under effective control and security?
- What actions or activities would a State need to undertake internally and internationally to make credible assurances?
- What would the organisations legally responsible for custody of the materials—from the head of government to the operator—have to do to provide assurances?

This paper seeks to address these questions by modelling an *assurance architecture* for nuclear security in an imaginary State called 'Ruritania'. By identifying the actions, statements, and information that would form an effective, credible internal assurance programme in Ruritania, this paper illustrates an approach States could pursue in the months leading up to the 2014 Nuclear Security Summit to continue to build international confidence in efforts to secure nuclear and other radioactive materials while protecting sensitive information.

This paper is intended to spur dialogue amongst experts regarding the role international assurances can play in strengthening the nuclear security regime. Because a government must assure itself before it can assure others, a State's internal assurance mechanisms facilitate its ability to provide international assurances. This paper seeks to illustrate how constructive and feasible an internal assurance programme for nuclear security would be and how it would provide a basis for stronger international assurances.

II. INTRODUCTION TO RURITANIA: A MODEL FOR PROVIDING INTERNATIONAL ASSURANCES

To demonstrate how an assurance programme might work within a State, this paper uses the fictitious country of 'Ruritania' as a model. The model assumes that Ruritania has uranium mines, civil nuclear power reactors, front-end nuclear fuel cycle facilities, nuclear-related research and development facilities, nuclear technology in medical institutions and private industry, and stationing of foreign-controlled nuclear weapons.

The Ruritanian government is based upon a common democratic structure that includes an independent nuclear regulatory authority – the Nuclear Regulatory Agency (NRA) – responsible for ensuring that effective nuclear security regulations are developed and implemented, a police agency reporting to a Ministry of the Interior, and licensed commercial operators that are responsible for implementation of specific nuclear security measures at facilities.⁴ Seeking to be seen as a responsible State, Ruritania has signed and implemented the most widely adopted treaties and agreements related to nuclear material control and regulation.

The assurance architecture for Ruritania represents a hierarchically-structured, comprehensive assurance programme that demonstrates how information and assurances can be provided at each level of governance, not

3. Dr. Robert Floyd (Australian Sherpa to the Nuclear Security Summit), "Non-Paper: International Assurances in Nuclear Security," March 2013.

4. Of course, bureaucratic structures vary widely in the real world; this model is intended to be both generic and adaptable.

just at the top level. Every public or private organisation involved with nuclear or other radioactive materials at the facility level is required to prepare an Annual Report providing information on the effectiveness of security policies and their implementation.

No. of Facilities	Facility or Site	Category of Material
2	Nuclear power plant	Vital Area (II)
1	Fuel fabrication facility	III
1	Uranium enrichment facility	III
1	R&D facility with research reactor	III
2	Uranium mines	-
1	University with critical assembly	III
17	Medical/industrial uses of high activity radioactive isotopes	Sources: 1/2/3

Table 1: Facilities Containing Nuclear or Radiological Materials in Ruritania

III. DEMONSTRATING INTERNATIONAL ASSURANCES ACROSS GOVERNMENT AND OTHER STAKEHOLDERS

International assurances can be provided across government and other stakeholders (e.g., by a head of government, ministries, the regulator, operators) to different beneficiaries (e.g., to the public, other governments, international organisations). To be able to provide international assurances, heads of government must first be assured internally of the effectiveness of the state’s nuclear security practices; consequently, leadership at the ministry, regulatory, and operator levels must take action or share information that provides internal assurances. However, these actions and the information shared can also provide international assurances directly to other governments, international organisations, and the public. In other words, assurances from these levels can go up the hierarchy (internal) and outwards outside the hierarchy (international).

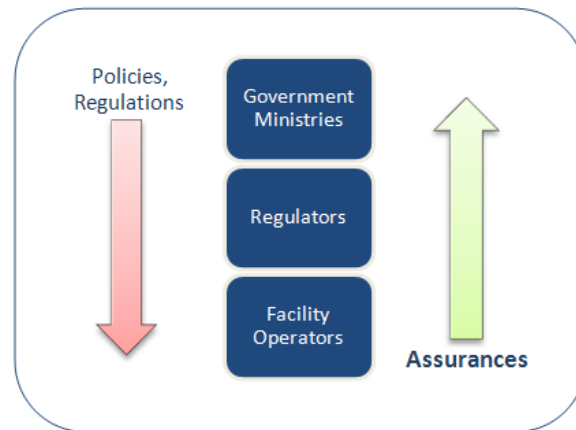
International assurances by heads of government can be further disseminated to a broader audience by international organisations and their secretariats when they share information about States and their commitments. For instance, the International Atomic Energy Agency (IAEA) Secretariat could share more of the nuclear security-related information it receives from States. Article 14.1 of the Convention on Physical Protection of Nuclear Material (CPPNM) calls on States party to provide the IAEA with their laws and regulations giving effect to the Convention and its amendment. Although the Agency is permitted to ‘communicate such information periodically to all States’ Parties,’ this assurance mechanism has remained dormant since the CPPNM’s passage.

Nearly all States already participate in some form of international assurance in association with the regimes for international nuclear safeguards and nuclear safety liability. Furthermore, some States and industry operators already provide assurances for nuclear security by releasing some information into the public domain. (The World Institute for Nuclear Security, or ‘WINS,’ endorses such activities as international best practice.) The challenge is to normalise nuclear security assurance practices so that this concept becomes an integral part of the nuclear security regime and global nuclear governance. The international assurance architecture that follows offers a proposed pathway toward this objective.

1. ASSURANCES BY HEADS OF GOVERNMENT

A credible internal assurance programme for nuclear security involves all stakeholders of nuclear governance. Assurance flows not from the top of government downward, but upward from the operator level, where those who manage and operate both civilian and non-civilian nuclear facilities are responsible for implementation of security practices. However, it is essential that leadership, from the very top of government all the way down, set the tone for a strong security culture, including the practice of assurances, by creating policies, laws, and regulations that underpin “excellence” in nuclear security.

Figure 1: *The Flow of Assurances in National Nuclear Governance*



Heads of government (the president, prime minister or other leading figure and his or her staff) can provide international assurances by making nuclear materials security a national and international priority, making public commitments to enhancing nuclear security, reporting on the implementation of those commitments, signing and ratifying international agreements, and directing responsible individuals to share information as required by those agreements, such as UN Security Council Resolution (UNSCR) 1540 and the CPPNM and its 2005 Amendment. (Heads of government similarly provide assurances in the safeguards and nuclear safety arenas as required by their IAEA Safeguards Agreements and Additional Protocols and the Convention on Nuclear Safety.⁵)

The head of government is responsible for translating the accountability of the internal assurance programme into international assurances. In crafting statements and declarations to the international community, the head of government can draw upon the entire range of a State’s assurances, specific actions, statements and commitments to the nuclear security regime. World leaders can also draw upon public, bilateral and multilateral engagement, including peer review by other States or organisations such as the IAEA and WINS. More than this, leaders need to require operators to demonstrate the effectiveness of their States’ systems.

Heads of government contribute to international assurances by:

- *Participating in international legal and voluntary arrangements where they make commitments to improve nuclear security, thus allowing themselves to be held accountable by the international community.* Because reputation matters, world leaders who stand behind nuclear security commitments must

5. Other widely-adopted legal instruments related to nuclear security include the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), the Code of Conduct on the Safety and Security of Radioactive Sources, the Supplementary Guidance on the Import and Export of Radioactive Sources, and UN Security Council Resolution 1373.

demonstrate to the international community a high and meaningful degree of confidence that their States' nuclear and radiological materials and facilities are secure. Leaders should provide meaningful international assurances by providing evidence of accountability at all levels of security management.

- *Ensuring that heads of ministries make nuclear security a priority and holding ministers accountable.* It is the head of government who sets national priorities. Thus, unless the head of government communicates that nuclear security is a priority, heads of ministries are unlikely to do so.
- *Ensuring that heads of ministries set the right tone for those at the regulatory and operator levels.* While a head of government sets national priorities, he or she also sets the tone by which those priorities are implemented. Heads of government can encourage a culture of continuous improvement and excellence by authorising and supporting activities and information sharing that contribute both to improvement of nuclear security and to international assurances.
- *Ensuring that their governments are forming the right policies.* Heads of government not only create priorities but direct, at a high level, how those priorities are translated into policies at the ministry level. These policies in turn are translated into regulations, which are then implemented at the operator level.

Head of Government Assurances in Ruritania

Ruritania provides assurance of how effectively its national nuclear security implementation is being addressed and what kinds of accountability are in place at all levels of security management. It seeks to provide this assurance by promoting and implementing its internal assurance programme as a means of explaining its system.

Ruritania's prime minister initiated an effort to develop an internal assurance programme within the State following the first international Nuclear Security Summit. In doing so, she cited the need to (1) strengthen nuclear security governance by identifying and developing a systematic framework of internal assurance mechanisms that transparently define accountabilities, and (2) demonstrate to the international community how States can make use of such a framework to provide confidence-building information to the international community without compromising national security.

Having established the framework, implemented various actions, and produced a trail of accountability to show *how governance is uninterrupted and structured from the level of the operator to top levels of government*, the prime minister, her executive staff, and top officials from the Ministry of Foreign Affairs can confidently demonstrate to the international community that Ruritania's nuclear and radiological materials and facilities are secure.

Although the most detailed (and perhaps most meaningful) nuclear security accountability statements are provided at the level of implementation by operators and regulators, the prime minister has the unique ability to speak for the effort and commitment of Ruritania as a whole, especially at the international level. For example, she can present the list of commitments that Ruritania has made to the nuclear security regime and provide an authoritative security accountability statement about its status and effectiveness. This international assurance potential is maximised when she demonstrates the accountability and effectiveness of Ruritania's national nuclear security regime through international assurances to her counterparts.

Actions and Information Sharing by Heads of Government

Heads of government can demonstrate their commitment to this process by:

- Participating in binding and nonbinding institutions and ratifying and adopting international agreements (e.g., CPPNM and its 2005 Amendment, UNSCR 1540, the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), and the Global Initiative to Combat Nuclear Terrorism (GICNT).
- Making public commitments at international meetings, such as the Nuclear Security Summits or other bilateral, regional, or multilateral gatherings of leaders.

- Supporting and encouraging international assurance activities at the ministry, regulatory and operator levels.
- Publicly sharing findings of internal assurance programmes.

2. ASSURANCES BY MINISTRIES

Ministries comprise senior policymakers, cabinet officials and government agencies. Consequently, they have considerable influence over many of the key activities in an effective nuclear security regime. Operators and regulators rely on government agencies to support and help coordinate threat assessment, security planning, enforcement, event response, border control, transportation regulation, and public relations—all central to effective nuclear security implementation and regulation within a State. Senior officials at the ministerial level can provide nuclear security assurances that speak to the effectiveness of law enforcement, threat assessment, and contingency planning. Ministries can provide international assurances because their leadership and experts represent State policy through diplomacy and multilateral engagement.

Ministry Assurances in Ruritania

In Ruritania, all ministries and semi-autonomous agencies with significant involvement in nuclear security are required to assess and account for their policies and activities in an annual report to the prime minister. When leading ministry officials present their reports in public (e.g., in front of Parliament), they provide assurances not just to the government and the public, but also to the international community, which recognises the ministers' authority and international visibility.

In the context of an internal assurance programme for nuclear security, Ruritanian ministry officials have the important role of providing assurances about the effectiveness of the independent nuclear regulatory authority. The country's autonomous Government Accountability Organisation assesses the quality and independence of NRA, whereas its Ministry of Energy (NRA's designated recipient of annual reporting) transmits political assurances about the regulator's effectiveness to other ministries, legislative bodies, the prime minister and the international community.

Ruritania's diplomatic officials at the ministerial level are instrumental in organising outreach to improve the national nuclear security regime through peer review mechanisms that provide international assurance. Ministry of Energy officials lead the effort to engage in bilateral security cooperation exercises, invite peer review missions by the IAEA and WINS, and engage policy and technical experts from nongovernmental organisations and academia.

Together with technical experts within ministry bureaus, ministry officials in Ruritania also undertake one of the most important functional capacities related to international assurances: the representation and negotiation of State policy through official declarations and reports, diplomacy, and engagement with other governments and international organisations.

Ruritanian officials seek to provide international assurance by openly publishing information on the results of their nuclear security practices and on their progress toward the establishment of an internal assurance programme for nuclear security.

Actions and Information Sharing by Ministries

- Submit UNSCR 1540 reports to the 1540 Committee. Make 1540 report and matrix publicly available.
- Submit CPPNM Article 14.1 report to the IAEA, including how laws and regulations give effect to the 2005 Amendment to the CPPNM (despite it not being in force).
- Publish CPPNM (and 2005 Amendment) Article 14.1 report.
- Publish annual reports of ministry activities related to the State's nuclear security practices, including oversight of the regulator.

- Publish annual report of nuclear security issues.
- Publish information about nuclear security practices, including annual security exercises and the results of those exercises.
- Provide regular declarations about quantities of nuclear materials and/or demonstrations of a regular accounting or auditing process.
 - Request and participate in peer reviews, including those offered by the IAEA. Examples include the International Physical Protection Advisory Service (IPPAS), the International Nuclear Security Advisory Service (INSServ), and WINS.
 - Publish non-sensitive findings of peer review.
 - Publish plans for responding to recommendations arising from peer review.
 - Request follow-up peer review.
- Host or participate in international workshops, conferences, summits, and meetings related to nuclear security where ministry officials can engage with foreign counterparts.
- Host or participate in bilateral best practice exchanges, physical protection assessments, and joint training and exercises (including tabletop exercises).
- Host and participate in workshops for the exchange of best practices, onsite training, and exercises (including tabletop exercises).
- Develop and participate in bilateral or multilateral best practice exchanges among States with similar facilities.
- Operate national training and certification programs for nuclear security professionals, including law enforcement, corporate governance, and others with nuclear security responsibilities.

3. ASSURANCES BY THE REGULATOR

INFCIRC/225/Rev.5 states: 'The responsibility for the establishment, implementation and maintenance of a physical protection regime within a State rests entirely with that State'. It should be noted, however, that this document does not provide a basis for the international community to verify the *effectiveness* of a security regime. Effectiveness must be assessed or demonstrated before it can be recognised. Demonstrating effectiveness provides real assurance; however, States currently vary widely in the level of effort and the amount of resources they are willing to commit to nuclear security regulation. The first step is to start with a process that begins with building confidence. Although the international community may not be able to verify a State's specific security practices, the global nuclear security system is strengthened by States taking steps to internally assure themselves and then provide information about their activities to others.

To this end, the nuclear regulatory authority has an essential role to play in nuclear security because it is responsible for establishing effective regulations, monitoring performance, and enforcing compliance. It is important that regulators be independent from operators (as well as from national and local politics) in order to perform their responsibilities successfully.

Regulatory oversight contributes to security assurance in many different ways. Simply performing the activities expected of a regulator, such as auditing, can be seen as providing international assurance because it demonstrates an accountability mechanism. Regulators can also provide information about the steps they have taken to maximise their competence and effectiveness, including participating in international peer review through Centers of Excellence, IAEA advisory missions, or WINS.

By sharing information on their performance assessment policies and including an authoritative Statement of

Accountability in their Annual Reports (both classified and unclassified), regulators can provide powerful international assurance regarding the effectiveness of security practices. For example, the UK Office of Nuclear Regulation publicly releases its annual report on the state of security in the civil nuclear industry to the Minister responsible for the Department of Energy and Climate Change (DECC).⁶ This report provides a complete overview of regulator practices to oversee security, including physical protection, information and transport security. It concludes with a concise Statement of Accountability from the Director that says, where appropriate, he is 'satisfied with the standards, procedures and commitment to security within the civil nuclear industry'.

Similarly, the U.S. Nuclear Regulatory Commission (NRC) releases an unclassified version of its annual report to the U.S. Congress on security oversight.⁷ This report announces the findings of NRC's routine inspection programme in terms of quantity and risk level of failures, summarises the results of its force-on-force testing programme, and discusses corrective actions implemented by licensees in response to observations from inspection and testing. NRC also uses the document to declare the level of internal assurance it has that the inspected facilities are continuing to meet the intent of regulations. These examples show how a nuclear regulatory authority can demonstrate its effectiveness by implementing best practices and openly reporting its activities as assurances, both to higher levels of government and to the public and international community.

Regulator Assurances in Ruritania

As Ruritania's regulatory authority, NRA demonstrates its transparency and effectiveness through a combination of reporting measures, public actions and external engagements. One of its major tasks is to provide regulatory oversight of Ruritania's nuclear facilities through:

- A routine inspection programme. Consequently, each of the 25 facilities in Ruritania that use or store nuclear or high activity radioactive material receives NRA security oversight inspection. Inspections occur at random times and take place at least once every six months. Higher risk facilities receive more inspections.
- Force-on-force performance evaluations, whereby a specially trained, mock adversary attacks a nuclear site. Preparation and review of the exercise typically involves four weeks of planning and tabletop exercises. Force-on-force tests are not simply pass/fail inspections, but the primary means to evaluate and improve the effectiveness of plant security programmes to prevent radiological sabotage.⁸ The agency conducts a force-on-force exercise at each of Ruritania's power plants and fuel cycle facilities at least once every four years.
- Reviews of reported information on implementation against the expectations—set through official regulations and standards. When an operator provides a security accountability statement indicating that implementation of security measures is effective—but NRA's own onsite inspections and remote performance monitoring indicate the opposite—NRA responds with enforcement actions. At the same time, it also assesses whether or not the regulation is sufficiently clear or appropriate.

If regulations and standards are met or exceeded—but they fail to prevent or respond effectively to nuclear security events—NRA may conclude that the standards and regulations are not strong enough. In this way, the information sharing mechanism built into the internal assurance programme acts as a continuous feedback mechanism for regulators and operators that enables Ruritania to improve the effectiveness of

6. UK Office of Nuclear Regulation, The State of Security in the Civil Nuclear Industry and the Effectiveness of Security Regulation, <http://www.hse.gov.uk/nuclear/documents/cn-security-annual-review.pdf>

7. United States Nuclear Regulatory Commission, Report to Congress on the Security Inspection Program for Commercial Power Reactors and Category I Fuel Cycle Facilities: Results and Status Update, <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1885/>

8. United States Nuclear Regulatory Commission. Fact Sheet on Force-on Force Exercises at Nuclear Power Plants. (Last reviewed/updated July 18, 2012). <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/force-on-force-fs.html>

its nuclear security regime on an ongoing basis.

NRA seeks to gain the trust and respect of operators by demonstrating a commitment to regulatory effectiveness and professional expertise. It also strives to communicate openly and regularly with its operators and to put effective feedback mechanisms into place. Similarly, NRA seeks to gain the trust and respect of its communities by directly engaging with local citizens. By sharing information about the nuclear industry and Ruritania's commitment to nuclear security, NRA enhances public trust in the nuclear security regime. In return, local communities are willing to help reinforce security culture and contribute to preventing or responding to a serious security incident.

- Publication of its fundamental assurance processes on its website and in a comprehensive Annual Report on nuclear security effectiveness titled *The State of Security in the Ruritanian Nuclear Industry and the Effectiveness of Security Regulation*. One of the goals in following this approach is to make it clear that NRA is committed to pursuing best practices of regulatory oversight.

The Annual Report is released in two versions: One consists of an unclassified version that is published on its website, and the other consists of a classified version that is sent only to the prime minister and the Ministers of Energy and Defence. The classified version of the report contains facility-level information about specific nuclear security weaknesses and deficiencies, whereas the unclassified version simply describes the type and quantity of weaknesses and deficiencies without referring to where or when they were identified.

Both versions of the report conclude with a security accountability statement written by the Chief Commissioner of NRA and is directed officially at the Ministries of Energy and Defence; however, the report also acts as a public statement that represents an authoritative assessment of the effectiveness of nuclear security in Ruritania.

Actions and Information Sharing by the Regulator

Ruritania's regulator:

- Publishes broad outlines of nuclear security regulations.
- Publishes annual reports on the State's nuclear security practices, including oversight of operators.
- Models the regulatory framework on the IAEA's Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Rev. 5) and its Nuclear Security Series guidance documents.
- Participates in peer reviews, including those offered by the IAEA (e.g., IPPAS, INSServ) and WINS.
- Works with the IAEA to request an Integrated Nuclear Security Support Plan (INSSP).
- Hosts or participates in bilateral best practice exchanges, physical protection assessments, and joint training and exercises (including tabletop).
- Hosts and participates in workshops for the exchange of best practices, onsite training, and exercises (including tabletop).
- Assists in development and participates in bilateral or multilateral best practice exchanges among States with similar facilities.
- Makes declarations as required by IAEA safeguards agreements.

4. ASSURANCES BY OPERATORS

It is possible for facility operator leadership to provide confidence-building assurances to both governmental and external stakeholders, including the public, while protecting sensitive information. A certain degree of openness about security governance is not only assuring to domestic stakeholders and the international community, but it also develops a company's, or a State's, reputation as a socially responsible actor. This, in turn, minimises

business risk for the industry, contributes to long-term business success, helps to ensure the security of publics and contributes to the sustainability of nuclear enterprises.

- For example, several of the world's leading nuclear power plant vendors recently developed and adopted a voluntary industry code of conduct. Titled the *Nuclear Power Exporters' Principles of Conduct*, it complements and often exceeds national laws and regulations.⁹ This voluntary action has raised the bar globally for the standards of responsible nuclear conduct while associating each company with best practice norms and promoting the integrity of the industry as a whole.

Operator Assurances in Ruritania

Nuclear security management organisations can undertake numerous activities that provide international assurances directly. These include the implementation of best practices at the operator level; participating in international best practice exchanges, workshops, certification programmes and training; commissioning peer reviews of the regulatory process or security implementation at the facility level in conjunction with the IAEA, WINS or a State partner; and pursuing various bilateral and multilateral cooperative measures that demonstrate a commitment to maintaining and improving nuclear security.

In addition to making statements, sharing reporting information, and demonstrating best practices, Ruritania provides international assurances by participating in nuclear security peer review mechanisms and other international regulatory interactions. Some of the ways in which it accomplishes this include:

- *IPPAS Missions*: At the national authority's request, IPPAS, an advisory service from the IAEA, visited Ruritania to review the country's national nuclear security regulatory framework and implementation practices. The mission also visited a facility to assess how the laws and regulations were being implemented. The IAEA assessed Ruritania's compliance with international guidelines and recommendations (INFCIRC/225/Rev.5 and the IAEA Nuclear Security Series) and provided its recommendations to enhance nuclear security. Ruritania has released a redacted summary of the IAEA's assessment and recommendations¹⁰ and has announced publicly that the IPPAS mission will return for progress assessments within three years. These actions demonstrate a commitment to openness and improvement that provides assurance to the international community.
- *Physical Protection Assessment*: Ruritania has also participated in a peer review mechanism that is built into its bilateral nuclear cooperation agreement with the United States. This mechanism invites security experts from the United States to assess the physical protection of nuclear fuel that originated in the United States. NRA has publicly announced that it requested and received support from the United States in planning site security for its nuclear power plant.
- *Best Practices Exchange*: Additionally, officials from NRA have participated in bilateral and international best practice workshops. Ruritania is an active supporter of WINS; after participating in WINS workshops on effective security regulation and engagement with external stakeholders, management at NRA simplified some existing regulations and made a conscious effort to increase its community outreach. Such efforts to measure and improve effectiveness through an accountability mechanism such as peer review provide confidence and assurance to the international community.

Actions and Information Sharing at the Operator Level

- Prepare an Annual Report providing information on security implementation. As part of the Report, the

9. See "Nuclear Power Exporters Principles of Conduct," <http://nuclearprinciples.org>, maintained by Carnegie Endowment for International Peace (interim secretariat for the Nuclear Principles).

10. IAEA IPPAS reports are designated as 'Highly Confidential', and their release is at the discretion of the State. Some States have recently decided to make redacted parts of the reports available in the public domain; this is seen as a best practice.

head of each organisation has been required to make a clear statement of accountability for security effectiveness by providing an explicit security accountability statement.

- Participate in peer review mechanisms offered by the IAEA (e.g., IPPAS, INSServ) and WINS.
- Participate in best practice exchanges and workshops, including those organised by WINS.
- Host or participate in bilateral best practice exchanges, physical protection assessments, and joint training and exercises (including tabletop).
- Host and participate in workshops for the exchange of best practices, onsite training, and exercises (including tabletop).
- Assist in the development of, and participate in, bilateral or multilateral best practice exchanges among States with similar facilities.

5. DEMONSTRATIONS OF ACCOUNTABILITY

- Similar to other sectors, companies and agencies in the nuclear industry should provide assurances and/or formal security accountability statements as part of their public Annual Report or Corporate Social Responsibility Report. For example, the U.S. NRC releases an Annual Report to Congress on their security assessment activities at commercial nuclear facilities.¹¹ Two versions are released: One is classified, and the other is unclassified and shared with the public. In the latter version, NRC provides information on the number of inspection and force-on-force testing activities carried out during the year without referring to any specific facility. It also provides an overall performance assessment based on a significance determination process in which security deficiencies are categorised into four levels of risk to public health and safety. Reporting along these lines could be shared with other States as a means of helping to build international assurance.

To be credible and meaningful, security accountability statements must provide confidence that accountability mechanisms are in place. Top-level government officials at a Nuclear Security Summit may not be concerned with the working-level details of nuclear security management, but they could provide more information and a security accountability statement about their State's national nuclear security regimes.

Appendix I provides models of Ruritania's security accountability statements across government and key stakeholders in the Ruritanian nuclear programme.

IV. CONCLUSION

International assurances should be an important component of a strengthened global nuclear security system. However, such assurances are dependent on credible domestic or internal assurances of effective nuclear security practices. By presenting a comprehensive internal assurance programme for a model state, this paper has sought to provide a deeper explanation of what assurances are all about, demonstrate how a State could provide assurances at all levels of nuclear security governance, and illustrate that such a programme would strengthen both the effectiveness of national implementation and international confidence in the global nuclear security regime.

To organise such a programme, this model proposes a specific set of deliverables based on activities undertaken to improve security, as well as on Annual Reports and security accountability statements. It should be clear, however, that assurance entails more than the filing of reports. In effect, it requires openness regarding peer

11. United States Nuclear Regulatory Commission, Annual Reports to Congress on the Security Inspection Program for Commercial Power Reactors and Category I Fuel Cycle Facilities, <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1885/> (accessed April 2013).

review, accountability mechanisms for all stakeholders, and actions that demonstrate effectiveness, as well as a cultural commitment to acknowledging and correcting weaknesses.

Although not all States are willing or able to generate a network of public security accountability statements,¹² it is hoped that developing the possibilities for accountability mechanisms and information-sharing in this way illustrates how a State could provide a deliverable package of international assurances to demonstrate effective nuclear security management. Emulating the Ruritanian internal assurance programme would greatly increase the transparency of nuclear security efforts, which is the main barrier to international confidence in the voluntary regime.

Although some States may perceive an internal assurance programme—and statements reporting the results of it—to be burdensome and overly-transparent, internal assurances support international assurances. It is important to understand that sensitive, facility-specific detail is not needed when sharing information about security practices and their effectiveness. An assurance programme can be implemented with existing governance structures and does not require governments to make significant investments in additional resources. The conservative analysis of costs used in this study demonstrates that an assurance programme would only add about 1% to the normal security operating costs of nuclear facilities.¹³ In short, most of what is new in international assurance architecture is the political and cultural commitment to make more information available about nuclear security within a State, and to do it in a structured, hierarchical manner.

As States consider whether and how to continue the high-level dialogue and reporting mechanisms established by the Nuclear Security Summit series, the concept of international assurance offers a way forward. Whether the summit process is continued at the head of government level, reduced to a ministerial level, folded into the work of other organisations (such as the IAEA, the UN 1540 committee, or the Global Initiative to Combat Nuclear Terrorism), or simply concluded, there remains a need for States to assure each other and the international community that their voluntary nuclear security regime is effective. Reporting systems should be designed not to track accomplishments, but to provide assurance about the effectiveness of national security regimes. An internal assurance programme can facilitate the deliverable assurances that form the basis for an effective voluntary reporting system and a strengthened nuclear security regime.

12. Not all States are willing or able to subscribe to international norms for open governance.

13. See Appendices II and III for an analysis of costs associated with security implementation, security oversight, and the assurance programme.

APPENDIX I – MODEL ACCOUNTABILITY STATEMENTS

The following are examples of security accountability statements across the Ruritanian government and key stakeholders in the Ruritanian nuclear programme.

1. Security Accountability Statement by the Head of Government

Security Accountability Statement by the Prime Minister

As the head of government in Ruritania, I strongly support efforts to strengthen global nuclear security and welcome the opportunity to contribute to this objective by providing assurances of the effectiveness of our national nuclear security regime.

Ruritania demonstrates its commitment to nuclear security by participating to the fullest extent in the binding and nonbinding institutions of the nuclear security regime. For example, we have ratified the CPPNM and its Amendment, and we are working to accelerate the Amendment's entry into force. We have also submitted a comprehensive declaration to the UN Security Council Resolution 1540 Committee demonstrating that Ruritania has established appropriate and effective laws to prevent non-state actors from developing, acquiring, manufacturing, possessing, transporting, transferring or using nuclear, chemical or biological weapons and their delivery systems.

Furthermore, we have ratified the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), and we participate in the Global Initiative to Combat Nuclear Terrorism (GICNT). We also have a Comprehensive Safeguards Agreement (INFCIRC/153) with the IAEA and an Additional Protocol in force. The IAEA Secretariat has provided assurance about the correctness and completeness of our nuclear material declaration. In its annual report on safeguards implementation, 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 concludes that all nuclear material in Ruritania remains in peaceful activities.

We strive to implement the IAEA's Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Rev.5) and its Nuclear Security Series guidance documents and have modelled our regulatory framework to encourage best practices. We also actively seek peer review of our nuclear security regulatory framework by hosting an IAEA IPPAS mission. We have invited IPPAS for a follow-up mission and have asked the IAEA to work with us on an Integrated Nuclear Security Support Plan (INSSP).

Our Nuclear Regulatory Authority (NRA) and corporate officials from licensed operators make use of best practice guides and workshops organised by WINS. Furthermore, experts from Canada and the United States have visited facilities in Ruritania as part of our bilateral nuclear cooperation programme; as a result, they have provided us with additional perspectives and physical protection assessments.

My government has developed and implemented an internal assurance programme for nuclear security. Every public and private organisation involved with nuclear or other radioactive materials at the facility level prepares an Annual Report that provides information on the effectiveness of security policies and their implementation. As part of the Annual Report, the head of each organisation provides a Statement of Accountability. Our NRA receives information about any security incidents that might occur, the lessons we can learn from such incidents, and how we can further improve our already strong nuclear security culture. I am also committed to continually improving our capability to detect, prevent and respond to the ever growing threat from cyber attacks. This year we have announced the formation of a Cyber Security Task Force.

Furthermore, I believe our State System of Accounting for and Control of Nuclear Material is effective and that it has provided complete and correct declarations in a timely manner. For all of these reasons, I am highly confident that the nuclear and radiological materials in Ruritania—and the facilities in which they are stored—are effectively controlled and highly secure.

2. Security Accountability Statements by Key Ministries

Statement on Nuclear Security by Ruritania's Secretary of Energy

In reporting to the Ruritania Parliament as the Secretary of the Energy, I can provide the following assurances about the effectiveness of our national nuclear security regime.

Our regulator, NRA, has provided assurances that are meaningful to national security and to the continued success of our national nuclear programme. NRA is overseen by Ruritania's independent auditor, the Government Accountability Organisation (GAO). In a recent report, GAO found that NRA is functionally independent and adequately funded. Officials and inspectors of the authority are independently-certified and competent.

No major nuclear security incidents took place during the last year. The fact that minor incidents were reported indicates the presence of a strong nuclear security culture. Furthermore, national regulations for nuclear security are consistent with government policies and legislation, particularly in respect to changes in the information security environment.

Ruritania has established verification and enforcement measures to ensure compliance with applicable laws, regulations and requirements, including the imposition of appropriate and effective sanctions. Oversight of the effective implementation of these measures is undertaken by the Ministry of the Interior with collaboration from NRA. A national threat assessment is coordinated across government ministries and communicated on a timely basis to licensees, the regulator and the police. The threat assessment is comprehensive, and the design basis threat (DBT) provides sufficient clarity to plan effective security management from the level of the operator upwards.

NRA's Chief Commissioner has assured me that the Authority is prepared to respond to the increasing threat of cyber attacks and is working closely with a specialised cyber response unit. In addition, NRA has effectively represented the State System of Accounting for and Control of Nuclear Material in coordinating international safeguards with the IAEA. I am pleased to report that Ruritania has provided a timely declaration pursuant to its Non Proliferation Treaty Safeguards Agreement, as well as a comprehensive Additional Protocol report.

The IAEA Secretariat has provided assurance regarding the correctness and completeness of our nuclear material declaration. In its annual report on safeguards implementation, 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 in Ruritania is being used for peaceful activities.

We welcome the recent IPPAS mission from the IAEA and have released a redacted summary of the IAEA's assessment and recommendations. We are currently implementing their recommendations and welcome the return of IPPAS for a progress assessment mission within three years. We also look forward to learning best practices for nuclear security from other States and plan to increase our active participation in workshops and exercises at our regional centre of excellence for nuclear security.

Finally, we are pleased to announce a series of cooperation agreements with Canada, Vietnam, Russia and France. The Ministries of Energy and Foreign Affairs are pleased to highlight the effectiveness of our nuclear security regime in promoting expansion of ties with other States and in exchanging best practices in the operation of our domestic nuclear fuel cycle.

Security Accountability Statement by the Police Agency

The national and regional police in Ruritania play an important role in providing armed response and policing services to nuclear licensees and for joint contingency planning in the event of significant security threats and/or incidents. The Ruritanian police understand that situations can escalate very quickly and deteriorate rapidly unless the right investment has been made in planning, certified police training and exercise drills. The Police Commander also understands the importance of “needing to share” intelligence information with other authorised organisations, including the licensees, and the essential role of the local community in helping to detect and report unusual and suspicious activities.

Statement on Security Accountability by the Commander of Police

As the Police Commander responsible for providing police support services to nuclear licensees in Ruritania, I am pleased to provide the following assurances.

The government of Ruritania operates an interdepartmental intelligence committee on which the Police Agency is represented and at which relevant information concerning threat assessments is considered and communicated to relevant organisations.

As required by government policy, all Operational Protocols and Memoranda of Understanding are current and approved between the Police Agency, the NRA, and nuclear licensees to ensure that appropriate and effective arrangements are in place to prepare for, and respond to, threats against nuclear facilities and nuclear material in transit.

During the year, the Police Agency took part in 23 different security exercises to test the effectiveness of response arrangements. Due to the positive results, I am satisfied that we have the necessary expertise and resources to provide an appropriate response.

With the support of the National Training Academy, the Police Agency has identified key competencies required of police officers with nuclear security accountabilities. We have also put a national training and certification programme in place to ensure that officers are demonstrably competent to prepare for and respond to nuclear security incidents that require a police response.

Finally, I am pleased to report that the Police Agency was inspected by the independent Police Review Committee, who found that our arrangements for nuclear security policing in Ruritania are effective. The Committee’s summary report is available to the public on our website.

Security Accountability Statement by Transportation and Border Control

During transport, nuclear materials are potentially at risk of theft or sabotage by terrorists or criminal groups since they are beyond the security regime of the site from which they are being transported. However, compensatory security measures by operators, regulators, law enforcement officers, border patrols, and intelligence services are required to be implemented in order to ensure the safe and secure transport of nuclear materials.

Statement on Nuclear Security by the Secretary of Transportation

As the Ministry of Interior (MOI) official responsible for safe and secure transportation for the nuclear industry, I would like to provide the following assurances to Parliament.

The Ruritanian government has passed a series of regulations that establish specific requirements for operators, law enforcement officials, and border control agents during the transport of nuclear and high activity radiological material, and for the inspection of transport operations at our national borders. Ruritanian laws and regulations on the transport of nuclear materials are based on guidelines and recommendations from INFCIRC/225/Rev.5 and the IAEA's Nuclear Security Series. They are consistent with Ruritania's obligations under UN Security Council Resolution 1540, the CPPNM and its 2005 Amendment, the Code of Conduct on the Safety and Security of Radioactive Sources, and the Supplementary Guidance on the Import and Export of Radioactive Sources.

A special agency under MOI brings together personnel from our border protection agency, law enforcement agencies and intelligence services. It is tasked with taking appropriate and effective steps to prevent, deter, detect, respond to and otherwise combat illicit trafficking in nuclear and other radioactive material. Part of this effort involves annual exercises that make use of actual nuclear materials. Ruritania has established verification and enforcement measures to ensure compliance with all applicable laws, regulations and requirements, including the imposition of appropriate and effective sanctions. Oversight of the implementation of these measures is undertaken by MOI with collaboration from NRA. I am pleased to confirm that as of this year all shipments of nuclear and other radioactive materials above category 2 are being tracked in real time by secure technology that provides instant notification to operators and response agencies of any potential unauthorised interference with the shipments.

Ruritanian customs officials and border patrol organisations under the authority of MOI contribute to nuclear security by maintaining the capability to detect and intercept unauthorised movement of nuclear and other radioactive materials effectively, both at borders and within States. As part of the national programme to provide international assurance of effective nuclear security, MOI and the Ministry of Foreign Affairs have jointly announced plans to hold a conference on best practices of nuclear material transportation. The conference will allow for the exchange of experiences and best practices, onsite training and exercises.

For all of these reasons, I am confident that the regulations in place in Ruritania are effective in securing the transportation of nuclear materials in the civil nuclear programme.

Security Accountability Statement by the Intelligence Services

Nuclear security has a specific objective: to prevent adversaries from successfully completing a malicious act and thereby achieving their purpose. A clear description of this threat, as detailed in the DBT, is an essential prerequisite for assured and effective security. Information for a State-level threat assessment is provided to nuclear regulatory authorities by Ruritania's intelligence services.

In Ruritania, each of the ministries has its own branch of intelligence services, but all of them collaborate amongst themselves and with NRA. This best practice provides assurance that the intelligence organisations are coordinated and produce a consolidated threat assessment that is focused on economic, critical national infrastructure and industrial sectors, including nuclear. Law enforcement personnel under the Ministry of the Interior identify local and domestic threats to sectors; political analysts from the Ministry of Foreign Affairs and the Ministry of Defence assess foreign terrorist and military threats; and scientists from the Ministry of Energy and the

Ministry of Defence assess technical threats and cyber attack capabilities. The complete, collaborative assessment is updated on a regular basis, and arrangements are in place to routinely provide the assessment to licensees.

Statement on Nuclear Security by the Director of National Intelligence

In keeping with the directions issued by the President, the National Joint Intelligence Committee (NJIC) has established robust procedures to collate, analyse and communicate national and regional threat-related information in order to help prevent and mitigate terrorism and serious crime from impacting on Ruritania's democratic activities and our citizens' right to peace, freedom and prosperity.

In respect of threats to nuclear and other radioactive materials, joint assessments are conducted on a periodic basis, as needs demand, and communicated to those government, public and business representatives that have the duty to take the necessary planning and precautionary measures. During the previous year, the threat assessment for the nuclear sector has been judged to be 'elevated'; consequently, representatives from the NJIC have led classified briefings with key individuals from the nuclear sector to ensure that the threats, risks and necessary counter-measures are properly understood by those Directors accountable for risk oversight. The NJIC also ran classified awareness courses for Board members and Senior Executives from the nuclear sector during the year; these were well-supported by the industry.

As a result of the NJIC's proactive efforts, a new joint liaison group has been established between the nuclear sector and the NJIC, including the NRA, to revise and update the DBT methodology and the secure communications systems that are currently in place. I am therefore pleased to provide assurances that the NJIC continues to be effective and has the support and confidence of those it serves.

Security Accountability Statement by the Defence Ministry

Although Ruritania is a non-nuclear weapon state with a civil nuclear programme, it hosts and provides security for a small, but unknown, quantity of nuclear weapons owned and operated by a member of the military alliance to which Ruritania belongs. While military officials cannot comment on activities taking place at specific sites, they can provide assurances of effective security by sharing some information with the public.

Statement on Nuclear Weapons Security by the Secretary of Defence

As the Secretary of Defence, I am responsible for ensuring the security of national defence sites in Ruritania. The owner of the nuclear weapons stationed in Ruritania is responsible for custody, repair and improvements to the nuclear weapons and storage bunkers in which they are located. Based on our longstanding, close cooperation with the leader of the Alliance that owns and operates the nuclear weapons on our soil, on the periodic force-on-force test simulations we carry out together, and on the fact that there have been no major security infractions at these sites in more than 30 years, I have full confidence in the capabilities of this leader to perform such actions safely and securely.

Ruritania contributes to the security of these weapons by providing consolidated threat information at each location. Furthermore, the Ministry of Defence and the Alliance have jointly coordinated a comprehensive programme of training, exercises, inspections, maintenance operations and related activities for military officials and guards at each site, as well as for offsite response arrangements in the event of an incident.

In light of the growing threat of terrorism in our region, however, as well as recent break-ins by activists at other Alliance military sites, the Ministry of Defence and the Alliance have announced a new programme to enhance perimeter security capabilities at Alliance defence sites in Ruritania. I continue to have the highest confidence in the effectiveness of security at such sites.

3. Security Accountability Statement by the Regulator

Statement on Nuclear Security Accountability by Ruritania's Head of Nuclear Regulatory Authority

In reporting to the government as the Chief Commissioner of NRA, I can provide the following assurances for the period covering 20xx to 20yy.

NRA was able to perform its duties effectively within its allotted budget, staffing and resources. No major security incidents occurred during the review period. A few low-level events related to security did occur, but they were mainly of an administrative nature. I consider the fact that operators reported these events as evidence of good security culture in Ruritania.

We have actively sought to make ourselves aware of best practices for security regulation by participating in an international nuclear regulatory forum, as well as in workshops and tabletop exercises organised by WINS. This year the State requested an IPPAS review, and it was favourable. Recommendations for improvements to oversight of nuclear transport and information technology are now being implemented. We also introduced major activities this year to reflect the increased threat of cyber terrorism to civil nuclear facilities. In addition, we implemented regulatory changes to require that all computing systems be placed behind a highly secure network.

NRA auditors performed 61 routine security inspections during the year, successfully meeting the objective of assessing the security of every facility in Ruritania that contains nuclear or other radioactive material. Furthermore, we have categorised security deficiencies into four levels of risk to public health and safety (Level I representing the strongest threat). Our security inspectors discovered 16 violations of national regulations during the course of routine inspections. Twelve of these consisted of Level IV violations of reporting procedures, and they were immediately clarified and resolved. Four represented Level III violations; they were addressed by replacing monitoring technology. In each case, the operator agreed to take corrective actions to ensure increased testing of equipment. No Level I or Level II security infractions or incidents were discovered during the year.

We carried out one force-on-force exercise, which was scheduled with the cooperation of the National Police Agency. The findings resulted in enhancements to the security plan for one of our operator's sites.

A selective audit indicates that more than 80% of our security guard personnel have completed nuclear-relevant certification programmes endorsed by NRA; this represents a 10% increase over the previous year. We continue to encourage licensees to require full certification as a best practice and new regulatory requirement.

Twenty-three out of 25 Security Plans are now 'approved'; the remaining two Security Plans are being revised in cooperation with NRA and in association with construction activities that expand onsite storage. NRA also issued 85 approvals for transportation of nuclear material through Ruritania.

For the period from 20xx to 20yy, I am satisfied with the standards, procedures and effectiveness of measures implemented to secure nuclear materials in Ruritania. I am also satisfied that regulatory activities are effective and proportionate at this time.

4. Security Accountability Statement by the Operator

Following is an example of a statement made by the CEO of RuriPower, a licensed operator in Ruritania. (Note how the statement illustrates a mechanism for accountability that is backed by performance assessment.)

Statement on Security Accountability by the CEO of RuriPower

As CEO of RuriPower, I recognise the need to provide assurance of effective nuclear security practices to our government, our shareholders, the international community and the public citizens we serve. I acknowledge that the responsibility for security implementation rests with me as the CEO and that security at our facility is overseen by the Board of Directors. I regularly inform the Board about the security threats that are assessed by government agencies to be credible. Our security programme is designed specifically to counter these threats.

The Director General of the NRA attends a Board meeting each year and provides his assessment of the effectiveness of security within our organisation. We benchmark this external assessment with our own assurance programme to ensure it is consistent and that no surprises occur for the Board.

We attach the same importance to security that we assign to safety, environmental and financial performance. Our security policy is based on internationally recognised best practices, IAEA guidelines and recommendations, and the strictest interpretations of national regulations. The report is publicly available on our website.

All personnel with accountabilities for nuclear security, including the Board and Executive Officers, have undertaken relevant professional training and are competent to oversee and make decisions relating to nuclear security.

A subcommittee of the Board has been specifically tasked with the responsibility to oversee implementation of our security programme. The subcommittee is chaired by a Director of the Board; members consist of Functional and Operational Directors across our business.

As part of a continuous security enhancement programme, which includes regular internal and external peer review, training and certification, and best practice exchanges, we identified three Level-4 (lowest risk) security deficiencies and one Level-3 (lower risk) deficiency at our facility during the last year. Although specific details are restricted to communications with leaders of the Ruritanian government, these deficiencies have been resolved.

Based on our security enhancements and the low level of incidents, I can report with *high confidence* that the standards, commitments and security systems at RuriPower's two nuclear power plants are appropriate and effective.

As a large, diversified operator, RuriPower seeks to strengthen its assurance to stakeholders by not only focusing accountability on the CEO, but also on the Director of the Business Group and on the corporate manager of specific types of fuel cycle. Following is an example of a statement made by RuriPower's Business Group Director.

Statement on Security Accountability by the Business Group Director of RuriPower

As RuriPower's Business Group Director, I can confirm that the business group has implemented an effective security assurance programme and that the programme has been internally peer-reviewed to meet our corporate requirements. We regularly assess overall performance of the security programme against agreed leading and lagging security indicators; consequently, we consider it to be effective.

In particular, I can confirm that all security incidents and identified deficiencies have been assessed and action steps have been taken to prevent their recurrence. I can also confirm that all relevant reports have been made to the corporate centre and to NRA. NRA identified one significant issue that our assurance programme had not adequately addressed; to avoid its recurrence, we modified our procedures.

All personnel within the Business Group who have accountabilities for nuclear security have undergone appropriate competency-based training and are certified according to their accountabilities. Furthermore, security and contingency/emergency plans are current and have been reviewed in the last 12 months in liaison with our police agency and NRA.

We also maintain an ongoing programme to assess nuclear security culture within our Group; any deficiencies that are identified are immediately addressed. My overall assessment of our security culture is that it is not only good but constantly improving.

These security accountability statements demonstrate how management at the operator level can provide credible assurances of actions taken to perform effective nuclear security implementation without revealing site-specific details that could compromise site security. The public reporting of such information provides the local public, regulators and international community with assurance that facility operators in Ruritania manage nuclear security effectively.