



NUCLEAR SECURITY FOR A NEW COMER COUNTRY –NIGERIA’S APPROACH

Ofofile O.N. and Agedah E.C.

Nigeria Atomic Energy Commission, No. 9 Kwame Nkrumah Crescent, Asokoro, Abuja FCT, Nigeria
onofodile@nigatom.org.ng, ebisomu.agedah@nigatom.org.ng



INTRODUCTION

1. Nigeria, for some time now, has been harnessing the applications of nuclear technology for the socio-economic development of the country and is on the process of deploying nuclear power plants for electricity generation. As such, the country is conscious of its responsibilities to provide for the security of nuclear material and other radioactive material and their associated facilities and activities; to ensure the security of such material in use, storage, or in transport; to combat illicit trafficking and the inadvertent movement of such material; and to be prepared to respond to a nuclear security event, in accordance with international best practices.

2. Nigeria has commenced the process of establishing a sustainable nuclear security regime by instituting the legal and regulatory framework, constitution of a national nuclear security committee and developed curricula for the training of nuclear professionals and site security personnel for them to develop nuclear security culture early in their career. In addition, facilities are being developed for the establishment of a nuclear security centre. Strategies to develop capacity to combat home grown violent extremism have also been initiated and implemented.

LEGISLATIVE AND REGULATORY PROVISIONS

3. As a new comer country to the nuclear industry and for the enthronement of a strict nuclear security regime, Nigeria is already implementing its nuclear power programme in full compliance with all relevant treaties and international conventions and in partnership with the international community. In this regard, Nigeria is domesticating all the relevant international treaties and statutes which regulate the conduct of the nuclear power industry that the country has ratified. Some of the international treaties which Nigeria has since ratified and in force are:

- a. Treaty on Non-Proliferation of Nuclear Weapons;
- b. Convention on Early Notification of a Nuclear Accident;
- c. The Treaty of Pelindaba on the African Nuclear-Weapon-Free Zone;
- d. African Regional Co-operative Agreement for Research, Development and Training related to Nuclear Science and Technology (AFRA) (Third Convention);
- e. Comprehensive Safeguards Agreement in connection with the Treaty on Non-Proliferation of Nuclear Weapons;
- f. Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency; and
- g. Vienna Convention on Civil Liability for Nuclear Damage.

4. Also, Nigeria is a signatory to and has acceded to the Amendment to the Convention on the Physical Protection of Nuclear Materials, 2005. Also, appropriate security frameworks are being strengthened with the international communities through bilateral and multilateral cooperation, particularly with the IAEA, WINS and PNS. Furthermore, a draft bill on Nuclear Safety, Security and Safeguards has been developed to domesticate these conventions and is being processed by the National Assembly for enactment into law. In addition and in compliance with a Presidential directive, the regulatory agency is working with all the relevant stakeholder agencies to get the National Assembly to enact the enabling Bills that would domesticate all the remaining pertinent international treaties which are already in force and include:

- a. Additional Protocol to the NPT (Non Proliferation Treaty);
- b. Convention on Nuclear Safety;
- c. Convention on Physical Protection of Nuclear Material (as amended in 2005);
- d. Joint Convention on Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management;
- e. Joint Protocol relating to the Application of the Vienna Convention and the Paris Convention; and
- f. Agreement on the Privileges and Immunities of the IAEA.

5. Furthermore, appropriate legal instruments such as, the NAEC Act and the Official Secret Act no. 29 of 1962 are in place and have provisions for restrictions on disclosure of information relating to nuclear installations, etc. Moreover, the Nigerian Regulations on Physical Protection of Nuclear Material and Nuclear Facilities has been finalised and awaiting gazetting while the document on Draft Regulations on Nigerian State System of Accounting for and Control of Nuclear Materials is undergoing finalisation before its gazetting.

NUCLEAR SECURITY ACTIVITIES

6. For the implementation of the legislative and regulatory provisions, we need physical, administrative and organisational structures. Thus, a National Nuclear Security Committee (NNSC) has been established. Its membership consists of personnel from NAEC, NNRA, the Academia and the Office of the National Security Adviser (ONSA). It has the responsibility of creating awareness of

nuclear security culture for all national stakeholders in the nuclear industry as well as the setting up of the national nuclear security centre.

7. Under the auspices of the ONSA, and in partnership with NAEC, NNRA and other security agencies, curricula of various nuclear security training programmes have been developed for professionals in the nuclear technology sector. The professionals include scientists, engineers, technicians and technologists. This is to ensure that the culture of nuclear security is inculcated in the workforce early in their careers.

8. As part of creating appropriate linkages with the international community, the Nigerian chapter of the Institute of Nuclear Materials Management has been formed with membership drawn from key organizations involved in the NP programme. Also, a professional organisation, the Nigeria Nuclear Security Professionals (NNSP), is being formed to cater for the interest and well-being of nuclear security professionals in Nigeria. Other areas of activities of the NNSP include peer reviews, mentorship and the enhancement of nuclear security culture in Nigeria.

9. IAEA has approved the hosting of Regional School for Nuclear Security for the African Region in NAEC's Nuclear Technology Centre (NTC), Sheda, Abuja. Arrangements are ongoing for the first edition of the school to be hosted during the Q2 of 2017. Thus, the Regional Nuclear Security Centre (RNSC) is being developed at the NTC for the training of all relevant African regional stakeholders in the nuclear power industry to meet international best practices.

10. NAEC has established a local nuclear security committee with the responsibility of developing all relevant nuclear security documentations and conducting nuclear security culture awareness programmes. So far, a draft Nuclear Security Plan, and a draft Guide to Integrated Management of Nuclear Security for Nuclear Facilities in Nigeria have been developed. Work is on-going for the production of documents on the following vital nuclear security areas:

- a. HRP for Nuclear Power Plants and NPP Owner Organization (including Behaviour Observation Programme – BOP).
- b. Rehabilitation Programs for Personnel under HRP.
- c. Security Screening Plan for Construction Workers During Construction Phase.
- d. Security Background Screening Plan for the Recruitment of Personnel for the Commissioning/Operation of the NPP.

12. Many staff members of NAEC have acquired some security awareness through participation in training workshops, conferences and meetings. Many members of staff of NAEC have been certified by WINS as nuclear security professionals. Nigeria continues to partner with all international, national and other organisations such as PNS, WINS, the US Department of Energy etc for development in nuclear security.

13. Security and background screening processes are entrenched in the selection exercises for the recruitment of staff. This is done in partnership with relevant security organizations in the country. Furthermore, specific job-related security training will be provided at the Nuclear Security Training facility.

14. The human resource development plan of our nuclear power programme provides for a selection process that requires personnel recruited to meet both educational, psychological and security requirements. The personnel currently have different levels of access to information and facilities while routine security clearance of personnel is imperative for continuous access to classified areas of nuclear facilities.

INSIDER THREAT AND NUCLEAR SECURITY IN NIGERIA

15. As in many countries of the world, home grown violent extremism exists in Nigeria. Its implication for the Nigerian nuclear power programme is in the area of insider threat that could arise from internal radicalised personnel or external radicalized persons in collusion with internal personnel seeking monetary gains or for ideological reasons.

16. Measures to minimise the threat include the acquisition and sustenance of a well trained workforce through various training programmes as well as certification programmes such as the WINS nuclear security professional certifications, maintenance of a dynamic DBT that captures evolving threats, creation of nuclear security culture awareness and implementation of a robust Human Reliability Programme (HRP) and Behaviour Observation Programme (BOP) etc. To this end, a pilot programme has been designed and is ongoing to produce a pilot HRP for the NIR-1 research reactor which will serve as a sample for the general national HRP with behaviour observation.

17. It is to be noted that the proposed new nuclear facilities are to be located in areas where fortunately, none of the homegrown violent extremism has the potential to take place. With the provision of the requisite security in line with a dynamic DBT and the regulator's security requirements, it can be concluded that there is minimal threat of homegrown violent extremism to the present and future nuclear facilities or activities in Nigeria.

MAP OF NIGERIA SHOWING AREAS WITH HVE AND NUCLEAR FACILITIES

