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INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

TO

CAMEROON

National Radiation Protection Agency (NRPA)

Yaoundé, Cameroon

19 to 23 November 2007

DEPARTMENT OF NUCLEAR SAFETY AND SECURITY

European Union

Conducted by the IAEA
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IAEA

INTEGRATED REGULATORY REVIEW SERVICE

IRRS

Under the terms of Article III of its statute, the International Atomic Energy Agency (IAEA) has the mandate to establish or adopt, in consultation and, where appropriate, in collaboration with competent organizations, standards of safety for protection of health and minimization of danger to life and property (including such standards for labour conditions), and to provide for the application of these standards to its own operations as well as to assisted operations and, at the request of the parties, to operations under bilateral or multilateral arrangements or, at the request of a State, to any of that State's activities concerning peaceful nuclear and radiation activities. This includes the publication of a set of Safety Standards, whose effective implementation is essential for ensuring a high level of safety. As part of its providing for the application of safety standards, the IAEA provides Safety Review and Appraisal Services, at the request of Member States, which are directly based on its Safety Standards.

In the regulatory framework and activities of the regulatory bodies, the IAEA has been offering, for many years, several peer review and appraisal services. These include: (a) the International Regulatory Review Team (IRRT) programme that provides advice and assistance to Member States to strengthen and enhance the effectiveness of their legal and governmental infrastructure for nuclear safety; (b) the Radiation Safety and Security Infrastructure Appraisal (RaSSIA) that assesses the effectiveness of the national regulatory infrastructure for radiation safety including the safety and security of radioactive sources; (c) the Transport Safety Appraisal Service (TranSAS) that appraises the implementation of the IAEA's Transport Regulations; and (d) the Emergency Preparedness Review (EPREV) that is conducted to review both preparedness in the case of nuclear accidents and radiological emergencies and the appropriate legislation.

The IAEA recognized that these services and appraisals had many areas in common, particularly concerning the requirements on a State to establish a comprehensive regulatory framework within its legal and governmental infrastructure and on a State's regulatory activities. Consequently, the IAEA's Department of Nuclear Safety and Security has developed an integrated approach to the conduct of missions on legal and governmental infrastructure to improve their efficiency, effectiveness and consistency and to provide greater flexibility in defining the scope of the review, taking into account the regulatory technical and policy issues.

The new IAEA peer review and appraisal service is called the Integrated Regulatory Review Service (IRRS). The IRRS is intended to strengthen and enhance the effectiveness of the State's regulatory infrastructure in nuclear, radiation, radioactive waste and transport safety, whilst recognizing the ultimate responsibility of each State to ensure the safety of nuclear facilities, the protection against ionizing radiation, the safety and security of radioactive sources, the safe management of radioactive waste, and the safe transport of radioactive material. The IRRS is carried out by comparisons against IAEA regulatory safety standards with consideration of regulatory technical and policy issues.

The new regulatory service is structured in modules that cover general requirements for the establishment an effective regulatory framework, regulatory activities and management systems for the regulation and control in nuclear safety, radiation safety, waste safety, transport safety, emergency preparedness and response and security. The aim is to make the IAEA services more consistent, to enable flexibility in defining the scope of the missions, to promote self-assessment and continuous self-improvement, and to improve the feedback on the use and application of the IAEA Safety Standards. The modular structure also enables tailoring the service to meet the needs

and priorities of the Member State. The IRRS is neither an inspection nor an audit but is a mutual learning mechanism that accepts different approaches to the organization and practices of a national regulatory body, considering the regulatory technical and policy issues, and that contributes to ensuring a strong nuclear safety regime. In this context, considering the international regulatory issues, trends and challenges, and to support effective regulation, the IRRS missions provide:

- a balance between technical and policy discussions among senior regulators;
- sharing of regulatory experiences;
- harmonization of the regulatory approaches among Member States; and
- mutual learning opportunities among regulators.

Regulatory technical and policy discussions that are conducted during IRRS missions take into account the newly identified issues coming from the self-assessment made by the host organization, visits to installations to observe inspections and interviews with the counterparts.

Other legally non-binding instruments can also be included upon request of the Member States, such as the Code of Conduct (CoC) on the Safety and Security of Radioactive Sources, which was adopted by the IAEA Board of Governors in 2004 and for which more than 85 Member States have written to the Director General of the IAEA committing themselves to implementing its guidance, and the Code of Conduct on the Safety of Research Reactors, which was adopted by the IAEA Board of Governors in 2005.

The IRRS concept was developed at the IAEA Department of Nuclear Safety and Security and then discussed at the 3rd review meeting of the Contracting Parties of the Convention on Nuclear Safety in 2005. The meeting acknowledged the importance of the IAEA regulatory peer reviews now recognized as a good opportunity to exchange professional experience and to share lessons learned and good practices. The self-assessment performed prior to the IAEA peer review mission is an opportunity for Member States to assess their regulatory practices against the IAEA safety standards. These IAEA peer review benefits were further discussed at the International Conference on 'Effective Nuclear Regulatory Systems' in Moscow in 2006, at which note was taken of the value of IRRS support for the development of the global nuclear safety regime, by providing for the sharing of good regulatory practices and policies for the development and harmonization of safety standards, and by supporting the application of the continuous improvement process. All findings coming from the Convention on Nuclear Safety review meetings and from the Moscow conference are inputs for the IRRS to consider when reviewing the regulatory technical and policy issues.

In addition, the results of the IRRS missions will also be used as effective feedback for the improvement of existing safety standards and guidance and the development of new ones, and to establish a knowledge base in the context of an integrated safety approach. Through the IRRS, the IAEA assists its Member States in strengthening an effective and sustainable national regulatory infrastructure thus contributing towards achieving a strong and effective global nuclear safety and security regime.

The Global Nuclear Safety Regime has emerged over the last ten years, with international legal instruments such as safety Conventions and Codes of Conduct and significant work towards a suite of harmonized and internationally accepted IAEA safety standards. The IAEA will continue to support the promotion of the safety Conventions and Codes of Conduct, as well as the application of the IAEA safety standards in order to prevent serious accidents and continuously improve global levels of safety.

With regard to the IRRS, the Director General of the IAEA, Dr Mohamed El Baradei, has stated that; 'The General Conference Resolution of September 2006 related to measures to strengthen international cooperation in nuclear, radiation and transport safety and waste management: "recognizes the importance of an effective regulatory body as an essential element of national nuclear infrastructure, urges Member States to continue their efforts to increase regulatory effectiveness in the field of nuclear, radiation and transport safety and waste management, and consider availing themselves of the Secretariat's new Integrated Regulatory Review Service (IRRS) and notes with satisfaction the increased interest of the Member States in the IRRS".

At his opening speech of the fiftieth regular session of the General Conference in 2006, the Director General stated that; "The Agency's safety review services use the IAEA Safety Standards as a reference point, and play an important part in evaluating their effectiveness. This year we began offering, for the first time, an Integrated Regulatory Review Service (IRRS). This new service combines a number of previous services, on topics ranging from nuclear safety and radiation safety to emergency preparedness and nuclear security. The IRRS approach considers international regulatory issues and trends, and provides a balance between technical and policy discussions among senior regulators, to harmonize regulatory approaches and create mutual learning opportunities among regulators".

In his introductory statement to the IAEA Board of Governors on 5th March 2007, the Director General said; "The newly established Integrated Regulatory Review Service (IRRS) is intended to help Member States enhance their legislative and regulatory infrastructures, and to harmonize regulatory approaches in all areas of safety. It will also be one of the most effective feedback tools on the application of Agency standards. The first full scope IRRS was conducted last year in France".

INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

REPORT TO

THE GOVERNMENT OF CAMEROON

NATIONAL RADIATION PROTECTION AGENCY

Yaoundé, Cameroon
19 to 23 November 2007

REPORT

INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

Mission date: 19 to 23 November 2007

Regulatory body: National Radiation Protection Agency (NRPA)

Location: Yaoundé, Cameroon

Regulated facilities and activities: medical, industrial and research applications

Organized by: IAEA

IAEA Review Team:

HAMMOU Azza	(Team Leader, Tunisia)
LAHRIGA Btissaime	(Reviewer, France)
SONCK Michel	(Reviewer, Belgium)
MANSOUX Hilaire	(IAEA/NSRW, Team Coordinator)

IAEA-2007-08
Issue date: July 2008

The number of recommendations, suggestions and good practices is in no way a measure of the status of the regulatory body. Comparisons of such numbers between IRRS reports from different countries should not be attempted.

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EXECUTIVE SUMMARY

At the request of the Director General of Agence Nationale de Radioprotection (NRPA) ,Cameroon, an international team of four experts in radiation safety visited NRPA from 19 to 23 November 2007 to conduct an Integrated Regulatory Review Service (IRRS) mission to review NRPA's regulatory framework and its effectiveness. NRPA is the regulatory body responsible for radiation protection and safety in relation to activities involving radiation sources and radiation facilities in Cameroon.

The purpose of this IRRS mission was to conduct a peer review of NRPA's regulatory framework and the regulatory activities in all regulated sources, facilities and activities, to review its regulatory effectiveness and to exchange information and experience in the areas considered by IRRS. It is expected that the IRRS mission will facilitate regulatory improvements in Cameroon and throughout the world from the knowledge gained and experiences shared by NRPA and the IRRS reviewers through the evaluation of the effectiveness of the regulatory framework.

The scope of the mission included sources, facilities and activities regulated by NRPA: medical activities, industrial and research activities, safety and security of radioactive sources. It included also technical functions, like personnel monitoring, environmental monitoring, foodstuff monitoring and calibration of radiation monitoring equipment.

The significance of the IRRS mission for NRPA is increased by the recent nomination of the Director General, the president and all administrators of the Board. NRPA can now start undertaking its functions and responsibilities.

The IRRS Review Team consisted of senior regulatory experts from three Member States and one staff members from the IAEA. The IRRS team carried out the review of NRPA in all relevant areas: legislative and governmental responsibilities; responsibilities and functions of the regulatory body; organization of the regulatory body; activities of the regulatory body, including the authorization process, review and assessment, inspection and enforcement and the development of regulations and guides, safety and security of radioactive sources, the management system and the information management.

From a series of intensive interviews and discussions with key personnel at NRPA, the observation of an inspection, together with the documentation supplied by NRPA in advance of the mission, the team presented its findings based on the IAEA safety standards. Additionally, the IRRS team, together with NRPA management, discussed some policy issues relating to the regulation of radiation safety. The results of the discussions will serve as a useful basis for the evolution of future IRRS missions and will assist with continuous improvement in the regulation of radiation safety.

The IRRS Review Team noted the significant effort made by NRPA in the preparation of the mission. Throughout the review, the administrative and logistical support was outstanding. The IRRS Review Team made recommendations and suggestions that indicate where improvements are necessary or desirable to further enhance the legal and governmental infrastructure for radiation safety and security, to improve effectiveness of regulatory controls and to better clarify the various activities of the NRPA. These recommendations and suggestions are made to an organization that is just starting its activities and some of them are related to areas in which NRPA has already initiated a programme for change. The IRRS Review Team believes that consideration of the following items should be given high priority because the experts considered that they will contribute significantly to the enhancement of the overall performance of the regulatory system:

- Completion of legislative and regulatory framework for better compliance with international standards, with the view to establish an effectively independent regulatory body with clearly assigned authority, responsibilities and resources;
- Effective implementation of regulatory activities of ANRP, based on the existing legislative and regulatory framework and with due consideration of the long time existing practices in the country;
- Formalisation of the NRPA organizational structure and recruitment of foreseen staff.

The IRRS Review Team findings are summarized in Appendix V. There was a strong consensus among the IRRS Review Team that NRPA and IAEA Member States have been improving the regulation of radiation safety through IAEA regulatory review missions and services.

The IRRS Review Team noted that within the NRPA team there is a strong will to advance in the field of radiation safety and security and all NRPA staff members seem to be highly motivated to turn their organisation into a strong and effective regulatory body.

I. INTRODUCTION

At the request of the Director General of the Agence Nationale de Radioprotection (NRPA), an IAEA team consisting of three experts from Member States and one staff member from the IAEA visited NRPA from November 19th to November 23rd 2007 to conduct an Integrated Regulatory Review Service (IRRS)[1] .

The purpose of the mission was to conduct a peer review of the NRPA regulatory framework and the regulatory activities, to review the regulatory effectiveness of NRPA and to exchange information and experience in the areas considered by IRRS. The areas reviewed were: legislative and governmental responsibilities; authority, responsibilities and functions of the regulatory body; organization of the regulatory body; the authorization process; review and assessment; inspection and enforcement; the development of regulations and guides; safety and security of radioactive sources; the management system and the information management, as well as the development of technical services.

In addition, the regulatory technical and policy issues considered in this review provide a greater understanding of the regulatory issues that may have international implications and assist in addressing specific technical issues relevant to the regulation of radiation safety. Regulatory technical and policy issues were identified after reviewing a broad spectrum of information including insights resulting from the conclusions of the review meetings of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and the Convention on Nuclear Safety, international conferences and forums and previous IAEA safety review services.

Before the mission, NRPA made available a collection of reference material for the team to review. This material consisted of legal and regulatory documents, as well as a report prepared earlier in 2007 for a regional coordination meeting on strengthening the control of radiation sources. During the mission the team performed a systematic review of all topics using the reference material, interviews with NRPA staff and direct observation of their working practices.

IRRS activities took place mainly at the Djeuga Palace Hotel, Yaoundé. One site visits took place at the General Hospital of Yaoundé (see Appendix III).

[1] This mission was initially organized with the RaSSIA protocol, and later converted into the IRRS Guidelines, but without changing its scope.

II. OBJECTIVE AND SCOPE

The purpose of the mission was to conduct an IRRS mission to review Cameroon's legal and governmental infrastructure for radiation safety and the effectiveness of the Cameroon's regulatory body (NRPA) and to exchange information and experience among NRPA and the IRRS team with a view to contributing to harmonizing regulatory approaches and creating mutual learning opportunities among regulators.

The key objectives of this mission were to enhance radiation safety by:

- ✓ Providing Cameroon (NRPA and governmental authorities) with a review of its radiation safety regulatory technical and policy issues;
- ✓ Providing Cameroon (NRPA and governmental authorities) with an objective evaluation of their and radiation safety regulatory activities with respect to international safety standards;
- ✓ Contributing to the harmonization of regulatory approaches among Member States;
- ✓ Promoting sharing of experience and exchange of lessons learnt;
- ✓ Providing key staff in Cameroon (NRPA and governmental authorities) with an opportunity to discuss their practices with reviewers who have experience of other practices in the same field;
- ✓ Providing Cameroon (NRPA and governmental authorities) with recommendations and suggestions for improvement of the national radiation safety regulatory infrastructure;
- ✓ Providing reviewers from States and the IAEA staff with opportunities to broaden their experience and knowledge of their own field; and
- ✓ Providing Cameroon (NRPA and governmental authorities) through completion of the IRRS questionnaire with an opportunity for self-assessment of its activities against international safety standards.

The scope requested by Cameroon for this IRRS mission was:

- radiation safety in medical, industrial and research activities;
- safety and security of radioactive sources;
- communication and public information;
- technical and scientific cooperation.

III. BASIS FOR THE REVIEW

A) PREPARATORY WORK AND IAEA REVIEW TEAM

The preparatory work for the mission was carried out by the IRRS Team Coordinator Hilaire Mansoux, NSRW/IAEA. According to the IRRS guidelines, the IRRS Team Leader, Mrs. Azza Hammou is an active senior regulator from an IAEA Member State (Tunisia). In accordance with the request from NRPA, and taking into account the scope as indicated above, it was agreed that the IAEA review team would comprise three external experts and one staff members (see Appendix I).

All details and organizational aspects were defined with the NRPA Director General, Professor Robert Martin Nemba.

A significant amount of work was carried out by the reviewers and by the IAEA staff before the review in order to prepare the draft report about the status of regulatory infrastructures in Cameroon, to prepare for the interviews and direct observations at the sites and to identify additional relevant material necessary to review during the mission.

An entrance team meeting was conducted on 18 November 2007 to discuss the specifics of the mission, to clarify the basis for the review, background, context and objectives of the IRRS and to agree on the methodology for the review and the evaluation among all reviewers.

B) REFERENCES FOR THE REVIEW

The main reference documents provided by NRPA for the review mission are listed in Appendix VI. The most relevant IAEA safety standards and other reference documents used for the review are listed in Appendix VII.

C) CONDUCT OF THE REVIEW

During the mission, a systematic review was conducted for all the review areas with the objective of providing NRPA with recommendations and suggestions as well as of identifying good practices. The review was conducted through meetings, interviews and discussions with NRPA personnel, visits to relevant organizations, assessment of the reference material, and direct observations regarding the national practices and activities, particularly in the context of inspections.

The team performed its activities based on the mission programme given in Appendix II.

The entrance meeting was held on Monday 19 November 2007 with the participation of NRPA senior management. Opening remarks were made by the Director General of NRPA, the IRRS Team Leader and the IRRS Team Coordinator. In addition, a review of the current national infrastructure was presented by NRPA.

The exit meeting was held on Friday 23 November 2007 with the NRPA Director General and regulatory staff of NRPA. The main conclusions were presented by the IRRS Team Leader. The draft mission report was handed over to NRPA at the end of the meeting.

1. LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES

Legislative and statutory framework

GS-R-1 § 2.2 (1)

The legislative framework to regulate the safety of facilities and activities is established through the Law 95/08 of 30 January 1995 on radiation protection (Loi portant sur la radioprotection).

In addition, the presidential decree 2002/250 of 31 October 2002 creates and defines the organization and function of the regulatory body, the Agence Nationale de Radioprotection (NRPA).

The law provides for more application decrees, in particular on the authorization system and on the control of activities but none has been prepared yet.

Establishment of an effectively independent regulatory body

GS-R-1 § 2.2 (2)

NRPA is established as the regulatory body by the decree, but not by the law. In the national legal framework, this decree is considered as an application of the law. It is foreseen to initiate a revision of the law so that the regulatory body will be introduced at the level of the law.

Decree 2002/250 establishes NRPA under the technical umbrella of the ministry of research and the financial umbrella of the ministry of finances. NRPA is administrated by a Board of Administrators (representing the President, the prime ministry and 8 ministries). The Director General supervises the daily activities of NRPA and reports to the Board. This provides for the effective independence from the operators and the bodies charged with the promotion of nuclear technologies.
However, one of the missions of NRPA listed in article 4 of the decree empowers NRPA to make recommendations on issues related to peaceful use of nuclear energy. This could be understood as a promoting role and needs clarifications.
Another issue concerning the effective independence of NRPA deals with its relation with the ministry of research for the assessment of applications and the granting of licenses. The decree states that NRPA should submit the applications to the Minister of Research. This provision needs modification since it may compromise the independence of NRPA.

Regulatory body - assigned responsibilities, authority, and resources

GS-R-1 § 2.2 (3)

The responsibility for authorization, regulatory review and assessment, inspection and enforcement and for establishing safety principles, criteria, regulations and guides is assigned by the law and the decree as followed:

Authorization

Neither the law, nor the decree, clearly assigns responsibility to NRPA for granting authorization. This lack has been acknowledged and will be covered in the revision of the law.

Regulatory Review and Assessment

The decree assigns responsibility to NRPA for review and assessment of applications in article 4.

Inspection
The decree assigns responsibility to NRPA for inspection in article 4.

Enforcement
Although some provisions on penalties exist in the law in articles 7 to 9, the responsibility for enforcement is not assigned to NRPA.

Establishing regulations, safety principles, criteria and guides
The decree assigns responsibility to NRPA for proposing standards in article 4; but neither the law, nor the decree, assigns responsibility to NRPA for establishing safety principles, criteria, regulations and guides.

GS-R-1 § 2.2 (4)
Since the law does not establish NRPA, there are no provisions related to its authority, power and staffing and financial resources. The decree describes the financial rules of NRPA, in particular the fact that the Director General has to propose an annual budget. There are no provisions to ensure that the resources allocated to NRPA are adequate to discharge its responsibilities.

GS-R-1 § 2.2 (5)
Article 4 of the decree gives NRPA responsibilities for making recommendations on the pacific use of nuclear energy and to conduct quality control of equipments. These responsibilities may jeopardize or conflict with its responsibility for regulating safety.

GS-R-1 § 2.2 (6)
There are no infrastructural arrangements for radioactive waste management.

GS-R-1 § 2.2 (7)
The law states that transport has to be regulated but there are no further infrastructural arrangements for the safe transport of radioactive material.

GS-R-1 § 2.2 (8)
The decree assigns responsibility to NRPA for proposing radiological emergency plans. A national emergency plan already exists but does not include yet the management of radiological risks.

GS-R-1 § 2.2 (9)
Physical protection and security of radioactive sources are not addressed in the existing legislation.

GS-R-1 § 2.2 (10)
Article 11 of the law addresses the issue of third party indemnification in the event of a radiation accident.

Operator responsibility

GS-R-1 § 2.3
The current legislation does not assign the prime responsibility for safety to the operator.

Legislative requirements
GS-R-1 § 2.4
The legislation does not provide for the effective control of radiation, radioactive waste and transport safety since:

- future generations are not included in the scope of the law,

- some radiation sources, e.g. electric generators are not included in the scope of the legislation,
- there are no provisions for exclusion from the legislation,
- the authorization process does not take into account the potential magnitude and nature of the hazard associated with facilities and activities (graded approach),
- the law does not establish the regulatory authority with appropriate funding, only the decree does but without addressing all provisions specified in GS-R-1.
- the law does not specify a process for removal of a facility or activity from regulatory control,
- the law does not establish a procedure for review of, and appeal against, regulatory decisions,
- the law does not clearly provide for continuity of responsibilities,
- the law does not allow for the creation of independent advisory bodies,
- The law does not clearly set out arrangements for provision of financial security in respect of any liability or radioactive waste management
- the law does not implement obligations under international treaties, conventions or agreements,
- the law does not define how the public and other bodies are involved in the regulatory process,
- the law does not specify the nature and extent of the application of newly established requirements to existing facilities and activities.

Authority of the Regulatory Body
GS-R-1 § 2.6 (1)-(14)

The current law and decree do not provide NRPA the authority:

- To develop safety principles and criteria
- To establish regulations and issue guidance, although NRPA can propose standards and make advice on draft regulations,
- to require any operator to conduct a safety assessment,
- to require that any operator provide it with any necessary information, including information from its suppliers, even if this information is proprietary;
- to issue, amend, suspend or revoke authorizations and to set conditions,
- to require an operator to perform a systematic safety reassessment or a periodic safety review over the lifetime of facilities,
- to enter a site or facility at any time to carry out an inspection,
- to enforce regulatory requirements,
- to obtain such documents and opinions from private or public organizations or persons as may be necessary and appropriate,
- to make available, to other governmental bodies, national and international organizations, and to the public, information on incidents and abnormal occurrences, and other information, as appropriate;

CONCLUSIONS	
C1	**Conclusion:** The legislation was adopted in 1995. This law predates GS-R-1 and as a consequence it is not fully consistent with current international standards.
C2	**Conclusion:** The present law does not establish a regulatory body for radiation safety with assigned authority, responsibilities and resources. The present decree establishes an effective independent regulatory body, with assigned functions and responsibilities that do not address all provisions specified in international standards.
C3	**Conclusion:** The present law does not assign the prime responsibility for radiation safety to the operator.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS: GS-R1** §2.2 – 2.6
R1	**Recommendation:** The republic of Cameroon should review and revise the law on radiation safety to ensure that it is consistent with international standards, in particular for establishing an effectively independent regulatory body, with clearly assigned authority, responsibilities and resources for discharging the main regulatory functions which are authorization, regulatory review and assessment, inspection and enforcement, establishment of safety principles, criteria, regulations and guides.
(1)	**BASIS:** GS-R-1 §2.3 states in part that: *"The prime responsibility for safety shall be assigned to the operator…"*
(2)	**BASIS:** SF-1 Principle 1: Responsibility for safety states that: *"The prime responsibility for safety must rest with the person or organization responsible for facilities and activities that give rise to radiation risks."*
R 2	**Recommendation:** The republic of Cameroon should review and revise the law on radiation safety to ensure that the prime responsibility for safety is clearly assigned to the person or organization responsible for facilities and activities.

2. RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY

Regulatory body - fulfilling statutory obligations

GS-R-1 § 3.1

Defining safety policies, principles and associated criteria are not clearly assigned to NRPA by the law. The decree gives only a consultative role to NRPA in these matters.

GS-R-1 § 3.2 (1)

Although the current legal framework does not give NRPA the leading role in establishing and adopting regulations and guides in the field of radiation safety and the security of radioactive sources, it is planned to be one of its main activities in the near future, in order to complement the regulatory framework. NRPA has already listed the main thematic areas to be covered by these regulations:

- medical diagnostic,
- nuclear medicine;
- radiotherapy;
- industrial radiography;
- use of radioactive gauges;
- transport of radioactive sources;
- exploration and exploitation of uranium mines;
- authorizations and inspections;
- management of radioactive waste;
- foodstuff monitoring

It is planned to introduce in these regulations the graded approach (based on the IAEA source categorization and the different practices) to ensure that extent of the control applied is commensurate with the potential magnitude and nature of the hazard presented.

GS-R-1 § 3.2 (2)

The decree gives NRPA the responsibility to review and assess applications. However, there is no clear mechanism established for this review and there is no clear requirement regarding the radiation safety demonstration to be submitted by the applicant. NRPA plans to establish a procedure to describe its review and assessment process. Limitation of the validity of the authorization in time is being considered, but no final decision has yet been made.

GS-R-1 § 3.2 (3) (i)-(x)

The current legislation does not clearly give NRPA the responsibility to issue, amend, suspend or revoke authorizations. However, this should be solved with the future revision of the law. In addition, NRPA has already started to work on the establishment of an authorization programme. Application forms and guidance documents for applicants are being prepared for the main categories of practices, based on available IAEA recommendations and examples from several other countries.

GS-R-1 § 3.2 (4)-(6)

Inspection is one of the functions of NRPA. There are currently no inspection activities but NRPA plans to establish an inspection programme in the near future.

Enforcement has not been assigned to NRPA. This will be modified by the revision of the law and NRPA has a plan to establish an enforcement strategy, in cooperation with the national enforcement authority.

Regulatory body – discharging its main responsibilities

GS-R-1 § 3.3 (1)-(5)

There is currently no process for dealing with application. NRPA has started to elaborate it. During the IRRS mission, all components of a standard application process have been discussed, including the necessity of clearly defined written procedures.

GS-R-1 § 3.3 (6)

NRPA plans to establish a strategic plan for communication with other competent governmental bodies, international organizations and the public. The NRPA Director General sees the Board of Administrators to be a possible means of communication with higher levels of authorities in the government.

GS-R-1 § 3.3 (7)-(13)

There are currently no mechanisms through which NRPA

- ensures that operating experience is appropriately analysed and that lessons to be learned are disseminated;
- ensures that appropriate records relating to the safety of facilities and activities are retained and retrievable;
- ensures that its regulatory principles and criteria are adequate and valid, and take into consideration internationally endorsed standards and recommendations;
- establishes and inform the operator of any requirements for systematic safety reassessment or periodic safety review;
- advises the government on matters related to the safety of facilities and activities;
- confirms the competence of personnel responsible for the safe operation of the facility or activity; and
- confirms that safety is managed adequately by the operator.

Extensive discussions on these matters and sharing of experiences from the IRRS Team members took place during the mission.

Regulatory body – cooperation with other relevant authorities

GS-R-1 § 3.4

There are no formal processes for co-operation with other relevant authorities but informal contacts have been taken with some of them: civil protection, customs and police. In addition, the recent designation of the Board, with delegates from various ministries, provides opportunities to initiate national cooperation.

Following discussions with the IRRS Review Team, it was noted that NRPA involvement in emergency preparedness and response should be addressed within a national cooperation programme.

Regulatory body – additional functions

GS-R-1 § 3.5

NRPA plans to undertake the following additional functions:

- environmental and food stuff monitoring,
- quality control measurements,
- calibration of radiation detection equipments,

- providing personnel monitoring.

Extensive discussions took place with the IRRS Review Team in relation to the potential conflicts with main regulatory functions and to the needed resources for conducting such functions.

CONCLUSIONS	
C4	**Conclusion:** The current legal framework does not address in a clear and comprehensive manner all the necessary functions and responsibilities of a radiation safety regulatory body. Moreover, there are discrepancies between the additional functions planned by NRPA and those listed in the decree.
C5	**Conclusion:** NRPA currently lacks specific regulations and detailed processes for implementing all its functions.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS:** GS-R-1 chapter 3
R 3	**Recommendation:** NRPA should urgently develop the needed set of regulations and associated guidance to properly address : • occupational, public and medical exposure, • authorization and inspection, • waste management, • transport of radioactive material.
(1)	**BASIS:** GS-R-1 §3.3 (1)
R 4	**Recommendation:** With due consideration of the long time existing practices in the country, NRPA should establish a gradual implantation of its functions and responsibilities, starting immediately with the national inventory of sources, facilities and activities, then establishing and gradually implementing the authorization process and finally the inspection and enforcement programmes. This can be started as soon as NRPA has staff and financial resources, without waiting for the publication of the revised legislation. The existing framework gives NRPA enough authority to start all the processes.
(1)	**BASIS:** GS-R-1 §3.4
S 1	**Suggestion:** NRPA should formalize its relationship with other relevant national organizations by developing Memoranda of Understandings, especially for emergency preparedness.

3. ORGANIZATION OF THE REGULATORY BODY

Organizational structure, size and activities

GS-R-1 § 4.1
There is currently no formal structure of NRPA. The Director General, appointed in April 2007, has drafted an organizational structure, which has to be validated by the newly established Board of Administrators. This structure will establish separate divisions for regulatory activities, technical services and administrative support. There is currently a team of about 15 technical and support staff affected to NRPA.

Since there is no precise knowledge of the number of facilities and activities to regulate, the definite size of NRPA is not known. However, a total staff of 24 scientific and 32 administrative persons is deemed to be necessary to fulfil all the functions and responsibilities of NRPA.

The first annual budget has been prepared for year 2008. It is currently being discussed in parliament.

Use of consultants and contractors

GS-R-1 § 4.3
NRPA does not intend to seek advice or assistance from consultants or technical organizations. On a case by case basis, international technical expertise might be requested.

Staffing and Training of the Regulatory Body

GS-R-1 §4.6-4.7
The current team includes various technical professionals: one lawyer, one radio-physicist, six physicists, three chemists, one environmental engineer, one agronomy engineer and two administrative support staff. Five of them have graduated from PGEC (Post Graduate Educational Course) in Morocco or South Africa.
Although this staff is considered to be insufficient, it constitutes a qualified starting team. It lacks practical experience and specialized training but has a sufficient theoretical background to start the implementation of all NRPA functions.

For future recruitment, a recruitment plan, including job descriptions, has been drafted and will be submitted to the Board.

NRPA also plans to develop a well defined training programme including initial training and continuous professional development, in particular to keep staff aware of technological developments and new safety principles and concepts. At this stage, the list of initial training needs for newly recruited staff has been prepared. It includes legislation and regulations, authorisation and inspection, waste management and radio-analysis.

Relations with the operators

GS-R-1 §4.10
NRPA is well aware that a frank and open, but formal relationship with the operators needs to be established to avoid unnecessary frictions. A progressive implementation of the safety requirements

in existing facilities is envisaged to facilitate their acceptation. Operators will also benefit from a special attention in the planned communication strategy of NRPA.

International co-operation

GS-R-1 §4.11
NRPA has not yet established contacts for international cooperation, although it plans to work with radiation safety regulatory bodies of the region, and take a more active role in IAEA regional projects.

The new interest for exploring and exploiting uranium mines and the growing oil industry in the Golf of Guinea provide opportunities for establishing cooperation between regulatory bodies in the region.

Cameroon having expressed support to the Code of Conduct for the Safety and Security of radioactive sources, NRPA will have to contact regulatory bodies in other countries for the import and export of category 1 and 2 sources.

CONCLUSIONS	
C6	**Conclusion:** The organization of NRPA is still in a draft stage, pending approval of the Board and allocation of the 2008 budget.
C7	**Conclusion:** Providing that it is formally affected to NRPA, the foreseen staff has adequate qualifications to initiate the regulatory activities. However, additional staff and competences are necessary for the long term development of NRPA.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS**: GS-R-1 §4.1 states: *"The regulatory body shall have an organizational structure and size commensurate withy the extent and nature of the facilities and activities it must regulate, and it shall be provided with adequate resources and the necessary authority to discharge its responsibilities."*
(2)	**BASIS**: Preamble to the BSS under "the regulatory authority" states: *"Such a regulatory authority must be provided with sufficient powers and resources for effective regulation…"*
(3)	**BASIS:** Preamble to the BSS under the regulatory authority states: *"The type of regulatory system adopted in a country will depend on the size, complexity and safety implications of the regulated practices and sources…"*
S 2	**Suggestion**: Once the national inventory of sources and facilities to be regulated is completed, NRPA should make a detailed analysis of its staffing needs in terms of number, qualifications, competencies and experience, in order to fulfil its functions effectively and efficiently.
(1)	**BASIS**: GS-R-1 §4.7 states*: "in order to ensure that the proper skills are acquired and that adequate levels of competence are achieved and maintained, the regulatory body shall ensure that its staff members participate in well defined training programmes. This training should ensure that staff is aware of technological development and new safety principles and concepts."*

R 5	**Suggestion**: NRPA should establish and implement a comprehensive training programme for the regulatory staff. This programme will be adjusted to the growth of activities and acquisition of experience and knowledge by the staff.
(1)	**BASIS**: GS-R-1 §4.11 states in part*: "National authorities,…, shall establish arrangements for the exchange of safety related information, bilaterally or regionally, with neighbouring States and other interested States, and with relevant intergovernmental organizations, both to fulfil safety obligations and to promote co-operation."*
S 3	**Suggestion**: NRPA should develop formal cooperation with other regulatory bodies in the region.

4. ACTIVITIES OF THE REGULATORY BODY

Notification

GS-R-1 §5.2, GS-G-1.5 §3.25
There are currently no regulatory provisions for a notification process. NRPA has not yet decided if separate processes should be established for notification and application of authorization. Examples of Belgium, France and Tunisia, where notification as such does not exist, were presented by the IRRS Reviewers.

In 2005, an inventory of radiation sources in the medical sector within the city of Yaoundé was established. NRPA plans to complement it with a national inventory campaign. This is one of the priority actions for 2008. A specific communication action will be conducted to announce it. Notification forms are being prepared to collect information on sources during the inventory. RAIS will be used to create the national register of sources.

Authorization

***GS-R-1 §5.3* - §5.6**
As already stated, the function of granting authorizations is not clearly established by the legislative framework. In addition, there is currently no authorization process in place. NRPA is currently establishing this process, with due consideration of international requirements and recommendations as well as examples provided by several countries. Specific regulations, guidance and procedures will be prepared, and will address, inter alia:

- the graded approach for the regulatory control, taking into account the categorization of sources and the different practices,
- the periodicity for renewal of authorization,
- the demonstration of safety to be submitted by applicants.

Review and assessment

GS-R-1 §5.7 - 5.11
There is no established process for review and assessment of applications. Safety objectives, principles and criteria that operators have to comply with and on which regulatory judgments and decisions will be based are not yet defined.

Inspection

GS-R-1 §5.14 - 5.17
There is currently no inspection process and the statute of inspectors is not defined. Regulations, guidance and procedures have to be established.

NRPA was very interested in the experience of the IRRS Reviewers in this activity and understood that the effective implementation of a formal inspection programme could take some time.

Enforcement

GS-R-1 §5.18 - 5.23
The enforcement responsibility is not clearly assigned by the legislation. There is no comprehensive enforcement policy in the radiation safety regulatory infrastructure of Cameroon. There is no

enforcement programme. Experience shared by the IRRS Review Team in this field was very much appreciated.

Regulations and Guides

GS-R-1 §5.25- §5.28

The regulatory framework makes provisions for additional regulations that need to be issued. Due to the early stage of development of the regulatory activities of NRPA, there are currently no regulations and guides being developed.

CONCLUSIONS	
C8	**Conclusion:** Although NRPA is not yet fully established, with allocated resources, some activities are initiated.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS:** GS-G-1.5 §3.25 states that: *"The regulatory body should maintain a national register of radiation sources. The main input of data to the inventory is provided via notification."*
S 4	**Suggestion:** NRPA should prepare a written procedure prior to conducting the national inventory campaign in order to formalize the methodology and the process, optimize the resources dedicated to that specific operation and ensure the efficiency of the collection of data.
(1)	**BASIS:** GS-R-1 §5.3 states in part that: *".demonstration of safety, which shall be reviewed and assessed by the regulatory body in accordance with clearly defined procedures."*
(2)	**BASIS:** GS-R-1 §5.6 states *"any subsequent amendment, renewal, suspension or cancellation of the authorization shall be undertaken in accordance with a clearly defined and established procedure. The procedure shall include requirements for the timely submission of applications for renewal or amendment of authorizations. For amendment and renewal, the associated regulatory review and assessment shall be consistent with the requirements of §5.3."*
(3)	**BASIS:** GS-R-1 §5.7 states*: "Review and assessment shall be performed in accordance with the stage in the regulatory process and the potential magnitude and nature of the hazard associated with the particular facility or activity.*
(4)	**BASIS:** GS-R-1 §5.8 states: *"In connection with its review and assessment activities, the regulatory body shall define and make available to the operator the principles and associated criteria on which its judgements and decisions are based."*
S 5	**Suggestion:** NRPA should develop a set of procedures to clearly describe the different steps of the authorization process that include: • review and assessment of initial application, • review and assessment of renewal or amendment of authorization, • principles and criteria on which the formal decisions of granting or refusal are based, • requirements for the timely submission of applications for renewal or amendment, • the consequences for operators in case of absence of formal decision within the specified time frame.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
	These procedures should implement the graded approach to adjust the extent of the control to the magnitude and nature of the hazard.
(1)	**BASIS:** GS-R-1 **§**5.4 states that*: "The regulatory body shall issue guidance on the format and content of documents to be submitted by the operator in support of applications for authorization."*
S 6	**Suggestion:** NRPA should develop guidance documents for applicants that take into account the categorization of sources and practices identified during the inventory.
(1)	**BASIS:** GS-R-1 **§**5.14 states in part: *"The regulatory body shall establish a planned and systematic inspection programme."*
S 7	**Suggestion:** NRPA should develop and implement a programme of inspections. The type of inspection should gradually move from a technical visit to a comprehensive regulatory control.
S 8	**Suggestion:** Based on IAEA guidance and other regulatory bodies' good practices, NRPA should develop inspection procedures and checklists adapted to the facilities and activities existing in the country.
(1)	**BASIS:** GS-R-1 §5.18-5.24
S 9	**Suggestion:** Based on the revised legislation, NRPA should consider the development a comprehensive enforcement programme.
(1)	**BASIS:** GS-R-1 §5.28 states that: *"In developing regulations and guides, the regulatory body shall take into consideration comments from interested parties and the feedback of experience. Due account shall also be taken of internationally recognized standards and recommendations, such as IAEA safety standards."*
S 10	**Suggestion:** NRPA should develop regulations and guides, as appropriate and needed, according to existing and planned facilities and activities and taking into account international safety standards.

5. SAFETY AND SECURITY OF RADIOACTIVE SOURCES

There are currently no specific provisions for safety and security of radioactive sources.

NRPA does not have access to equipment and facilities for the handling, transport and temporary storage of radioactive sources following recovery of an orphan or vulnerable source.

There are no safe and secure storage areas at ports of entry to Cameroon.

NRPA has not established communication with scrap metal dealers to encourage them to have appropriate monitoring programmes to detect radioactive sources.

At present there is no formal process for assessing the transport safety arrangements for imported or exported sources while in transit.

Cameroon has yet implemented neither provisions of the "Code of Conduct on safety and security of radioactive sources" nor provisions of the complementary "Guidance on the Import and Export of Radioactive Sources" although formal support has been expressed to the Director General of IAEA.

CONCLUSIONS	
C9	**Conclusion:** Safety and security of radioactive sources is currently not explicitly addressed in Cameroon.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS:** BSS §2.34
(2)	**BASIS:** Code of Conduct on the Safety and Security of Radioactive Sources
S 11	**Suggestion:** The Government of Cameroon and NRPA should consider adding provisions related to the safety and security of radioactive sources in the revision of the Law and the future regulatory framework.

6. INFORMATION MANAGEMENT

Regulatory Activity Information Management

The decree assigns responsibility to NRPA for collecting and sharing information in the field of radiation safety.

NRPA has not yet established and implemented procedures for the collection and the dissemination of information related to radiation safety.

NRPA has not yet established and implemented procedures to ensure security of sensitive information.

NRPA plans to set up a strategy for information management, including the protection of sensitive data.

Public information and communication

NRPA is aware of the importance of public information and communication and wants to establish a nationwide communication plan.

Media were invited to the opening of the IRRS mission to increase the public awareness on radiation safety and the need for regulatory control of the use of ionizing radiation.

CONCLUSIONS	
C 10	**Conclusion:** Responsibility to manage information related to radiation safety is assigned to NRPA. However, due to the early stage of establishment of NRPA, no activity is in place.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS: GS-R-1 §3.3(6)** "*In order to discharge its main responsibilities, …, the regulatory body shall communicate with, and provide information to, other competent governmental bodies, international organizations and the public"*
S 12	**Suggestion:** NRPA could use the Regulatory Authority Information System (RAIS) to manage all the information related to its regulatory activities (national register of sources and facilities, authorizations, inspection and incidents).

7. POLICY ISSUES

The standard list of policy issues was proposed in the discussion session but NRPA chose to treat rather four points that seem to be important for it:

- information and communication, development of the safety culture,
- technical cooperation,
- staff training and competency development,
- balance between the regulatory and the technical functions of NRPA.

7.1 Information and communication, development of the safety culture

Communication is one of NRPA functions. NRPA team requested advises from IRRS Reviewers concerning public information policy and methodology.

Following the discussion, three levels of communication were identified, which have to be undertaken in different ways.
The first one is communication with the public, which should be sufficiently simple in its approach to explain clearly the missions of NRPA, the benefits versus the risks of radioactivity and radiation sources and other items of general interest. Proactive information following incidents and accidents is another important issue within communication with the public. As communication with the public will often use the media, building a correct relation with the media, based on mutual confidence, is a challenge. In relation to this, it was also pointed out that all communications to the media have to be very well-prepared and that all information transferred has to be correct and as complete as possible, without compromising the eventual sensitivity of it.
The second one is the communication with people professionally related to the different uses of ionising radiation (professional associations, like dentist associations, association of veterinarians, …). NRPA wishes to organise this communication according to the different categories of counterparts (medical, industry and research). It was suggested to actively include these associations within the processes of drafting the specific regulations.
The last one concerns the communication with the universities and training institutes, to create specific training and education programmes in the area of radiation protection. This should ensure continuity in the availability of well-trained human resources, as it is foreseen that there will be a growing need in the future.

7.2. Technical cooperation

The cooperation with other countries is considered to be essential for NRPA, in particular at this early stage of its development.
NRPA relies strongly on the technical cooperation with senior regulatory bodies of other countries, to gain benefits from their experiences and high level of competences.
The discussion showed that there is also a great interest to collaborate with regulatory bodies of similar state of development in the region and facing the same issues (e.g. safety and security of radioactive sources at borders) and challenges (e.g. retaining qualified staff, growth of oil industry in the region of the Golf of Guinea). Sharing resources, knowledge and experience can contribute to the common progress in regulating radiation safety.
It was acknowledged that IRRS missions create opportunities for further bilateral cooperation between participating countries in all aspects of regulatory functions. The organization of cross inspections was suggested.

NRPA was briefed on all existing regional projects coordinated by IAEA and AFRA in which it could contribute. The project of other African countries to establish a regional regulators network was also mentioned.

7.3. Staff training and competency development

NRPA wonders about the most suitable educational background and complementary training of inspectors.
From the experience of the reviewers who are coming from different backgrounds, it was emphasized that:

- there is not a unique profile that is suitable for the inspector job,
- a specific training in radiation protection is necessary,
- and most importantly, on the job training is mandatory.

Development and maintenance of competences in NRPA is also of great concern. In the context of starting a new structure with new functions, there is first a need for external resources to train the staff. Then, with building of experience over time, most of the resources to train new staff can be found internally. In addition, continuous professional development is essential.
This internal knowledge transfer can be jeopardized by the difficulty to retain highly trained and qualified staff. NRPA has to be prepared to face this challenge. Practical suggestions like minimal contract duration, interesting financial conditions and carrier plans, were discussed.

7.4. Balance between the regulatory and the technical functions of NRPA

NRPA plans to develop technical activities like personal and environmental monitoring, quality control and calibration of equipments.
IRRS reviewers draw attention of NRPA on the risk to compromise the development of regulatory activities by dedicating resources in an unbalanced manner for what are considered by international standards as additional functions, not necessarily fulfilled by the regulatory body.
The priority has to be given to fundamental regulatory activities and the development of dosimetry services. Since environmental monitoring requires expensive equipments and infrastructures, it should be developed at a later stage.

APPENDIX I – LIST OF PARTICIPANTS

INTERNATIONAL EXPERTS		
Azza HAMMOU	Centre national de radioprotection (CNRP) - Tunisia	aza.hammou@rns.tn
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APPENDIX II – MISSION PROGRAMME

Date/time	Programme	Participants
19 November		
09:00–10.00	Entrance meeting with senior officials of NRPA	Full IRRS Team Senior officials of NRPA
10.00–11.00	Review of IRRS programme	Full IRRS Team and NRPA
11.00 – 13.00	Discussions on the status of the national regulatory infrastructure component 1 – '**Legislative and Statutory Framework'** • Legislation. • Regulations and guidance. • Regulatory body establishment and independence. • Regulatory body staffing and training. • Regulatory body funding. • Co-ordination and co-operation at the national level. • International co-operation.	Full IRRS Team and NRPA
13:00 – 14:00	Lunch	
14:00 – 17:00	Continued discussions on the status of the national regulatory infrastructure component 1 – 'Legislative and Statutory Framework'	Full IRRS Team and NRPA
18.00–23.00	Preparation of findings and drafting of IRRS report	IRRS Team

20 November		
09.00–13.00	Continued discussions on the status of the national regulatory infrastructure component 1 – 'Legislative and Statutory Framework' and component 2 – 'Activities of the Regulatory Body'	Full IRRS Team and relevant NRPA
13.00–14.00	Lunch	
14.00–17.00	Continued discussions on the status of the national regulatory infrastructure component 1 – 'Legislative and Statutory Framework' and component 2 – '**Activities of the Regulatory Body'** • Notification and national register of radiation sources. • Authorization • Safety and security of radioactive sources • Inspection • Enforcement. • Information management. • Quality management	Full IRRS Team and NRPA
17.00–23.00	Preparation of findings and drafting of IRRS report	IRRS Team

21 November		
09.00–13.00	IRRS Team observation of regulatory inspections of medical facilities (diagnostic imaging, radiation therapy, nuclear medicine)	IRRS Team members working in smaller groups or as individuals, NRPA staff
13.00–14.00	Lunch	
09.00–13.00	IRRS Team working at HQ with relevant regulatory staff to clarify issues arising from discussions and to begin preparation of preliminary draft report.	IRRS Team member and NRPA
17.00-23.00	Preparation of preliminary draft report	IRRS Team

22 November		
9.00–13.00	Presentation of the draft report with recommendations and suggestions by IRRS Team to NRPA	Full IRRS Team and NRPA
13.00–14.00	Lunch	
14.30–17.00	Drafting of IRRS preliminary draft report	Full IRRS Team
16.00-17.00	Policy issues discussion session	IRRS Team and NRPA
17.00–23.00	Preparation of preliminary draft report	Full IRRS Team

23 November		
09.00–13.00	Exit meeting Summary of findings and recommendations, action plan	Full IRRS Team Senior officials of the bodies have a regulatory role in Cameroon and if appropriate, Ministerial staff and / or others.
13.00–14.00	Lunch and depart	

APPENDIX III – SITE VISITS

Since there is not a formal inspection programme in place, there was no inspection observation during the IRRS Mission. However, ANRP managed to organize a visit of the General Hospital of Yaoundé for the IRRS Team, where diagnostic radiology, radiotherapy and nuclear medicine are on-going practices.

During the visit, the IRRS Team observed many irregularities in the radiotherapy service. The Co60 source is more than 10 years old and should have already been replaced twice. Treatments have to be extended over a longer period of time (about 45 minutes) to deliver the required dose. Medical staff explained that patients are moving, getting bored or nervous during treatment; therefore they ask for the assistance of comforters to enter the radiotherapy room and calm the patients. Medical staff reported that some patients get skin burns during treatment. The computer normally used for doing dose calculations prior to the treatment is broken; therefore no preliminary dose estimation is done. Treatments are still performed, for about 30 patients per day. The equipment for shielding or reducing the beam is in a very bad condition; some parts are broken. The radiophysicist said that she had asked the IAEA (TC) to provide new equipment to replace the old ones. There seem to be no monitoring for the workplace. At the day of the visit, no worker was wearing a dosimetry film.

This situation, which is very serious according to the opinion of the IRRS Team, was reported to the Director General of the Regulatory Body. He replied that he would appreciate IAEA support to collect sufficient technical expertise so that he could take the most appropriate decision. NSRW and TCAF are coordinating actions to strongly suggest to Cameroon officials to improve the situation on an urgent basis.

APPENDIX IV – MISSION COUNTERPARTS

Item	Subject Area	IRRS Experts	Counterparts
	Legislative and governmental responsibilities	M. MANSOUX Hilaire Mme HAMMOU Azza M. SONCK Michel Mme LAHRIGA Btissaime	M. NEMBA Robert Martin M. OBAMA Sébastien M. EMADAK Alphonse M. EVINA EHONGO J.M. M. HAIETA M. MAPEL MA MAPEL Etienne M. DJAKA MAYOL J. E. M. M. ELE ABIAMA Patrice M. SABOUANG Jean Faustin M. BEYALA ATEBA Jean Félix M. NJIKI Calvin Didier Mme MARIE Lydie Rose M. AGENDIA
	Responsibilities and Functions of the Regulatory Body		
	Organization of the regulatory body		
	Activities of the Regulatory Body		
	Management System for the Regulatory Body		
	Policy Issues		
	Public Information		
	Safety and Security of Radioactive Sources		

REVIEWERS AND CONTRIBUTORS

APPENDIX V – RECOMMENDATIONS, SUGGESTIONS, GOOD PRACTICES

	Areas	**IAEA Comment No** ***R: Recommendations,*** ***S: Suggestions,*** ***G: Good practices***	***Recommendations, Suggestions or Good Practices***
A	Legislative and governmental responsibilities	*R1*	The republic of Cameroon should review and revise the law on radiation safety to ensure that it is consistent with international standards, in particular for establishing an effectively independent regulatory body, with clearly assigned authority, responsibilities and resources for discharging the main regulatory functions which are authorization, regulatory review and assessment, inspection and enforcement, establishment of safety principles, criteria, regulations and guides.
		R 2	The republic of Cameroon should review and revise the law on radiation safety to ensure that the prime responsibility for safety is clearly assigned to the person or organization responsible for facilities and activities.
B	Responsibilities and functions of the regulatory body	*R 3*	NRPA should urgently develop the needed set of regulations and associated guidance to properly address : • occupational, public and medical exposure, • authorization and inspection, • waste management, • transport of radioactive material.

	Areas	IAEA Comment No *R: Recommendations,* *S: Suggestions,* *G: Good practices*	*Recommendations, Suggestions or Good Practices*
		R 4	With due consideration of the long time existing practices in the country, NRPA should establish a gradual implantation of its functions and responsibilities, starting immediately with the national inventory of sources, facilities and activities, then establishing and gradually implementing the authorization process and finally the inspection and enforcement programmes. This can be started as soon as NRPA has staff and financial resources, without waiting for the publication of the revised legislation. The existing framework gives NRPA enough authority to start all the processes.
		S 1	NRPA should formalize its relationship with other relevant national organizations by developing Memoranda of Understandings, especially for emergency preparedness.
C	Organization of the Regulatory Body	*S 2*	Once the national inventory of sources and facilities to be regulated is completed, NRPA should make a detailed analysis of its staffing needs in terms of number, qualifications, competencies and experience, in order to fulfil its functions effectively and efficiently.
		R 5	NRPA should establish and implement a comprehensive training programme for the regulatory staff. This programme will be adjusted to the growth of activities and acquisition of experience and knowledge by the staff.
		S 3	NRPA should develop formal cooperation with other regulatory bodies in the region.

	Areas	IAEA Comment No *R: Recommendations,* *S: Suggestions,* *G: Good practices*	*Recommendations, Suggestions or Good Practices*
D	Activities of the Regulatory Body	*S 4*	NRPA should prepare a written procedure prior to conducting the national inventory campaign in order to formalize the methodology and the process, optimize the resources dedicated to that specific operation and ensure the efficiency of the collection of data.
		S 5	NRPA should develop a set of procedures to clearly describe the different steps of the authorization process that include: • review and assessment of initial application, • review and assessment of renewal or amendment of authorization, • principles and criteria on which the formal decisions of granting or refusal are based, • requirements for the timely submission of applications for renewal or amendment, • the consequences for operators in case of absence of formal decision within the specified time frame. These procedures should implement the graded approach to adjust the extent of the control to the magnitude and nature of the hazard.
		S 6	NRPA should develop guidance documents for applicants that take into account the categorization of sources and practices identified during the inventory.
		S 7	NRPA should develop and implement a programme of inspections. The type of inspection should gradually move from a technical visit to a comprehensive regulatory control.

	Areas	IAEA Comment No *R: Recommendations,* *S: Suggestions,* *G: Good practices*	*Recommendations, Suggestions or Good Practices*
		S 8	Based on IAEA guidance and other regulatory bodies' good practices, NRPA should develop inspection procedures and checklists adapted to the facilities and activities existing in the country.
		S 9	Based on the revised legislation, NRPA should consider the development a comprehensive enforcement programme.
		S 10	NRPA should develop regulations and guides, as appropriate and needed, according to existing and planned facilities and activities and taking into account international safety standards.
E	Safety and Security of radioactive sources	*S 11*	The Government of Cameroon and NRPA should consider adding provisions related to the safety and security of radioactive sources in the revision of the Law and the future regulatory framework.
F	Information Management	*S 12*	NRPA could use the Regulatory Authority Information System (RAIS) to manage all the information related to its regulatory activities (national register of sources and facilities, authorizations, inspection and incidents).

APPPENDIX VI – REFERENCE MATERIAL PROVIDED BY NRPA

[1] Loi 1995/08 du 30 janvier 1995 portant sur la radioprotection

[2] Décret 2002/250 de 31 octobre 2002

APPENDIX VII – IAEA REFERENCE MATERIAL USED FOR THE REVIEW

[1] INTERNATIONAL ATOMIC ENERGY AGENCY International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. Safety Series 115, IAEA (1996)

[2] INTERNATIONAL ATOMIC ENERGY AGENCY Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety. Safety Standards Series No. GS-R-1, IAEA (2000)

[3] INTERNATIONAL ATOMIC ENERGY AGENCY Code of Conduct on the Safety and Security of Radioactive Sources. IAEA/CODEOC/2004

[4] INTERNATIONAL ATOMIC ENERGY AGENCY Independence In Regulatory Decision Making International Nuclear Safety Advisory Group (INSAG) Report 17, IAEA (2003)

[5] INTERNATIONAL ATOMIC ENERGY AGENCY Regulatory Control of Radiation Sources GS-G-1.5, 2004

[6] INTERNATIONAL ATOMIC ENERGY AGENCY Categorization of Radioactive Sources RS-G-1.9, 2005

[7] INTERNATIONAL ATOMIC ENERGY AGENCY Legislation and Establishment of A Regulatory Authority for the Control Of Radiation Sources (draft)

[8] INTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Nuclear Medicine, Safety Reports Series No. 40 (2005)

[9] INTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Radiotherapy, Safety Reports Series No. 38 (2006)

[10] INTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Diagnostic Radiology and Interventional Procedures using X-Rays, Safety Reports Series No. 39 (2006)

[11] INTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Industrial Radiography and Industrial Irradiators (draft)

[12] INTERNATIONAL ATOMIC ENERGY AGENCY Building Competence in Radiation Protection and the Safe Use of Radiation Sources, RS-G-1.4

[13] INTERNATIONAL ATOMIC ENERGY AGENCY. Safety Report No 20: Training in Radiation Protection and the Safe Use of Radiation Sources

[14] INTERNATIONAL ATOMIC ENERGY AGENCY TECDOC 1525 Notification and Authorization for the use of radiation sources

[15] INTERNATIONAL ATOMIC ENERGY AGENCYTECDOC 1526 Inspection of Radiation Sources and regulatory enforcement

[16] INTERNATIONAL ATOMIC ENERGY AGENCY Guidance on the Import and Export of Radioactive Sources. IAEA/GIERS/2005

[17] INTERNATIONAL ATOMIC ENERGY AGENCY Quality Assurance within Regulatory Bodies. IAEA-TECDOC-1090 (1999).

[18] INTERNATIONAL ORGANIZATION FOR STANDARDIZATION Quality Management Systems Fundamentals and Vocabulary. ISO 9000: 2000, Geneva (2000).

[19] INTERNATIONAL ATOMIC ENERGY AGENCY TECDOC-1355 Security of Radioactive Sources (2003)

[20] INTERNATIONAL ATOMIC ENERGY AGENCY TECDOC 1388, Strengthening Control over Radioactive Sources in Authorized Use and Regaining Control of Orphan Sources. IAEA, Vienna (2004).

[21] INTERNATIONAL ATOMIC ENERGY AGENCY, Preparedness and Response for a Nuclear or Radiological Emergency, Safety Series No. GS-R-2, IAEA Vienna (2002).

[22] INTERNATIONAL ATOMIC ENERGY AGENCY, Regulations for the Safe Transport of Radioactive Materials, Safety Series No. TS-R-1, IAEA, Vienna (2000)

[23] EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT, The EFQM Excellence Model, Brussels (1999).

APPENDIX VIII –NRPA ACTION PLAN

Le plan d'action ci-après comprend trois parties :

- Le cadre législatif et réglementaire ;
- Les activités de réglementation ;
- Les activités techniques.

I. ELABORATION DU CADRE LEGISLATIF ET REGLEMENTAIRE

I.1. Révision de la loi 95/08 du 30 janvier 1995 portant sur la radioprotection
I.2. Elaboration des projets de décrets, des arrêtés, des normes et des codes de bonnes conduites des pratiques

Dispositions législatives et réglementaires relatives au financement de l'autorité réglementaire
Dispositions législatives et réglementaires relatives à la coordination et la coopération au niveau national
Dispositions législatives en matière de coopération internationale

II. ACTIVITES REGLEMENTAIRES

II.1. Planification, programmation et mise en œuvre de l'inventaire national des sources de rayonnements ionisants
II.2. Mise en place d'un registre national de sources de rayonnements ionisants
II.3. Mise en place d'un système de notification et d'autorisation
II.4. Mise en place des dispositifs de sûreté et de sécurité (codes de bonnes pratiques,…)
II.5. Mise en place des procédures d'inspection
II.6. Suivi de l'application de la réglementation (mobilisation de toutes les parties prenantes et vérifications sur le terrain)
II.7. Mise en place d'un système de gestion d'information et de communication interne et externe
II.8. Mise en place d'un système de management de la qualité

III. ACTIVITES TECHNIQUES D'APPUI

1. Dosimétrie
2. Radio analyses
3. Gestion des déchets
4. Maintenance et étalonnage

IV. DOCUMENTS DE REFERENCES

- Aperçu de programme de Pays
- BSS 115
- Loi N° 95/08 du 30/01/1995 portant sur la radioprotection
- Décret n° 2002/250 du 31octobre 2002 portant création de l'ANRP
- Organigramme ANRP
- Code de conduite
- Rapport IRRS Novembre 2007

Ce plan d'action identifie les activités essentielles et nécessaires pour le développement opérationnel de l'Agence Nationale de Radioprotection. Ces activités comportent la mise en place d'un cadre législatif et réglementaire, des activités techniques de contrôle et de surveillance des milieux professionnels, des patients, des populations et de l'environnement et enfin celles relatives à la m‡trologie des rayonnements ionisants et la gestion des déchets radioactifs. Il inclut les tâches à exécuter ainsi qu'un programme de mobilisation des ressources par la voie de la coopération multilatérale avec l'AIEA.

I. CADRE LEGISLATIF ET REGLEMENTAIRE

TACHES	EXECUTE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
I.1 Révision de la loi I.1.1 Considérant, la loi n° 95/08 du 30 janvier 1995 portant sur la radioprotection, considérant le décret n° 2002/250 du 31 octobre 2002 portant création et organisation de l'ANRP, considérant les vides juridiques relevés, une révision de la loi sera effectuée en tenant compte des normes fondamentales internationales de protection contre les rayonnements ionisants, ainsi que des autres documents de référence de l'AIEA et du contexte camerounais. I.1.2 La nouvelle loi devra être appropriée et adaptée à la nature des installations et des pratiques mises en oeuvre au Cameroun. Elle devra prévoir en particulier: • Le champ d'application de la loi ; • Les prescriptions relatives à l'exclusion, à l'exemption et à l'autorisation de la gestion des sources radioactives ; • Les prescriptions relatives aux agréments ; • Les prescriptions de gestion concernant en particulier la mise en place des procédures et des mesures adéquates pour le contrôle de sources radioactives ;	Gouvernement du Cameroun /ANRP	1er - 4eme trimestre 2008	- Fourniture des normes fondamentales, du code de conduite et des autres publications appropriées. - Mission d'expertise et d'assistance législative l'AIEA accordera des visites scientifiques aux personnels de l'ANRP vers des pays munies d'une réglementation appropriée en vue de la préparation du projet de loi,	• SS 11 [1] • BSS 115 [1] • GS-R-1 [2] • CoC [3] • INSAG Report 17 [4] • GS-G-1.5 [5] • Législation et mise sur pied de l'autorité réglementaire pour le contrôle des sources de rayonnements (Draft) [7]. • GS-R-1, § 2.1, 2.4 [2 • CoC, § 18, 19 [3] • B SS 115, Detailed Requirements [1] • GS-R-1 § 5.25–5.28 [2] • CoC § 18 [3] • Reference [7] • TECDOC-1355

TACHES	EXECUTE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
• Les prescriptions relatives à la sûreté et à la sécurité des sources radioactives ; • La définition des responsabilités ; • L'organisation des inspections réglementaires • Les moyens d'application des mesures coercitives ; • Les mesures de contrôle et de constatation des infractions ; • La surveillance de l'exposition des travailleurs sous rayonnement, du public et de l'environnement ; • Les limites réglementaires des doses en milieu professionnel; • Le contrôle de l'exposition médicale ; • La gestion des déchets radioactifs ; • Le transport des sources radioactives ; • Les interventions en situation d'urgence radiologique ; • Les dispositions de recours aux décisions prises par l'ANRP; • Les mesures appropriées pour veiller à ce que l'importation ou l'exportation des sources radioactives s'effectue en conformité avec les normes internationales ; • Les mesures pour le contrôle et la récupération des sources orphelines.				

TACHES	EXECUTE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
I.1.3. Evaluation de la structure de Radioprotection • Législation et statut de l'ANRP • Activités de l'ANRP	ANRP	Novembre 2007	Experts (Mission RaSSIA)	
I.2. Elaboration des projets de normes et de codes de bonne conduite des pratiques I.2.1.Pour faciliter le respect des dispositions législatives et réglementaires, des normes et des codes de bonne conduite des pratiques seront élaborés pour : - la radiologie diagnostique ; - la téléthérapie ; - la brachythérapie ; - la médecine nucléaire ; - la radiographie industrielle ; - l'irradiation industrielle ; - les jauges nucléaires ; - les diagraphies ; - les radiotraceurs et les marqueurs radioactifs; - le contrôle des denrées alimentaires ; - la maintenance des équipements et des appareils nucléaires - l'extraction des minerais (Uranium, Thorium, etc) - la radiologie interventionnelle - la surveillance de l'environnement	ANRP	1er - 4eme trimestre 2008	Après élaboration des projets de normes et des codes de bonne conduite des pratiques, l'AIEA fournira une mission d'expert pour amendements éventuels.	• GS-R-1, § 5.25 – 5.28 [2] • CoC, § 22(m) [3]
I.2.2. Adoption des normes et des guides de bonne pratique	ANRP	1er trimestre 2009		

TACHES	EXECUTE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
I.2.3. Signature des décrets et arrêtés Finaliser les projets de décrets/arrêtés d'application de la loi suivant les pratiques et prendre les dispositions nécessaires pour leur signature par le gouvernement	Gouvernement du Cameroun / ANRP	1er - 4eme trimestre 2008		
I.3. RECRUTEMENT ET FORMATION DU PERSONNEL DE L'ANRP I.3.1 RECRUTEMENT I.3.1.1. Elaboration et adoption de l'organigramme I.3.1.2. Elaboration et adoption du statut du personnel I.3.1.3. Elaboration des fiches de postes de travail I.3.1.4. Recrutement et affectation du personnel.	ANRP	2007 - 2008	Validation des fiches en liaison avec l'AIEA	• GS-R-1 § 4.6 [2] • CoC § 21 [3] • Guide pour les Autorités pour le recrutement et la formation du personnel (Working Materials for Comments)
I.3.2. FORMATION - Développement et mise en oeuvre d'un programme de formation du personnel assurant, les formations spécialisées dans les domaines d'activité de l'ANRP et les recyclages périodiques. - Organisation des cours régionaux et nationaux	ANRP	A partir de 2008	- Appui de l'AIEA dans le cadre des Projets de coopération technique, de cours régionaux ou nationaux - Ressources AFRA	• GS-R-1 § 4.7 [2] • CoC§ 10 [3] • GS-R-1 § 2.2(4) [2] • Guide pour les Autorités pour le recrutement et la formation du personnel (Working Materials for Comments)

TACHES	EXECUTE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
I.4. COOPERATION AVEC LES ORGANISMES NATIONAUX Coopération nationale : Etablissement d'une coopération formelle avec les autres organismes impliqués en matière de sûreté et sécurité des sources (Douanes, transport, forces de l'ordre, protection civile, etc…)	ANRP/Gouvernement	A partir du 1er trimestre 2008	Fourniture de modèle de protocole d'accord.	• GS-R-1 § 3.4 [2] • CoC § 20(m) [3] • TecDoc 1525
I.5. COOPERATION INTERNATIONALE I.5.1. Coopération régionale: Etablir des mécanismes d'échanges d'information sur la sécurité et la sûreté nucléaires avec les pays voisins. I.5.2. Coopération avec les Organisations internationales. Etablir des mécanismes d'échanges d'information sur la sécurité et la sûreté nucléaires avec les organisations internationales spécialisées	ANRP/Gouvernement du Cameroun	A partir du 1er trimestre 2008	Fourniture de la documentation appropriée (conventions internationales, ,etc…) Facilitation de l'accès au site Web du RaSaReN (**Ra**diation **Sa**fety **Re**gulators **N**etwork)	• GS-R-1, § 4.11 [2] • CoC, § 12, 20(n) [3]

II. ACTIVITES REGLEMENTAIRES

TACHE	EXECUTEE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
II.1. Inventaire national des sources de rayonnements ionisants II.1.1. Planification de l'opération d'inventaire II.1.2. Missions d'inventaire : - dans les installations - des sources orphelines **II. 2 Registre national de sources:** II.2.1. Créer et mettre à jour un registre national de sources de rayonnements ionisants II.2.2. Le registre national des sources doit comporter au moins les sources des catégories 1 et 2 définies dans l'annexe 1 du code de conduite II.2.3. Elaborer et approuver les procédures d'identification et de classification des sources radioactives II.2.4. Mettre en place des mesures appropriées pour assurer la confidentialité des informations relatives aux sources radioactives notamment l'informatisation des données dans le RAIS 3.0	ANRP	1er trimestre 2008 A partir du 1er trimestre 2008 A partir du 1er trimestre 2008	Fourniture d'equipements (Kits standard de RadPro) En cas de besoin, mission d'experts de l'AIEA	• CoC, § 11, 17. Annexe 1[3] • Reference [14] • Reference [6]

TACHE	EXECUTEE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
II.3. Notification des intentions d'entreprendre une pratique mettant en œuvre des sources de rayonnements ionisants II.3.1. Etablir un mécanisme effectif de notification à l'ANRP des projets de mise en oeuvre des pratiques	ANRP	A partir du 3 .me trimestre 2008	Mission d'experts	• SS 115, § 2.7 – 2.8, 2.10 [1] • Reference [14]
II.3.2. Notification préalable à l'importation ou l'exportation des sources radioactives L'ANRP doit prendre des dispositions pour que l'importation et l'exportation des sources radioactives soient faites conformément aux recommandations du code de conduite et du guide sur l'importation et l'exportation des sources radioactives.	ANRP/ Gouvernement du Cameroun	A partir du 1er trimestre 2008	Mise à disposition du code de conduite et des guides sur l'importation et l'exportation des sources radioactives	• CoC, § 23 – 25 and 28 [2] • GIERS 2005 Parts VII-IX [16] • RS-G-1.9 [6]
Autorisation				
II.3.3. Etablissement d'un système d'autorisation: II.3.3.1. Elaboration et adoption de formulaires de demande d'autorisation II.3.3.2. Elaboration et adoption des procédures d'autorisation	ANRP	A partir du 1er trimestre 2008	**Visites scientifiques**	• BSS 115, § 2.7, 2.8, 2.11 – 2.14 [1] • GS-R-1, § 5.3 – 5.6, [2] • CoC, § 22(a) [3] • Reference [14] • Reference [6] • Reference [19]
II.3.3.3 Elaboration et adoption de procédures pour l'amendement, la suspension et le retrait des autorisations.	ANRP	A partir du 1er trimestre 2008	Visites scientifiques	• GS.R-1 § 5.5 (1, 2) [2]

TACHE	EXECUTEE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
II.3.3.4. Elaboration et adoption des procédures de recours aux décisions de l'ANRP	ANRP		Visites scientifiques	• GS.R-1 § 2.4 (7), [2]
II.3.4. Autorisation d'importation et d'exportation des sources radioactives II.3.4.1. L'ANRP doit prendre des dispositions pour que l'importation et l'exportation des sources radioactives soient faites conformément aux recommandations du code de conduite et du guide sur l'importation et l'exportation des sources radioactives	ANRP/ Gouvernement du Cameroun	A partir du 1er trimestre 2008	Visites scientifiques, Formation des douaniers et forces de maintien de l'ordre	• CoC, § 23 – 25 and 28 [2] • GIERS 2005 Parts VII-IX [16]. • Reference [14]
II.4. Mise en place des dispositifs de sûreté et de sécurité. II.3.1. Définition des niveaux de sûreté et de sécurité II.4.1.1. Etablissement des procédures de détermination des différents niveaux de sécurité en fonction de la catégorisation des sources II.4.1.2. Etablissement des procédures pour intervenir dans les situations ci-après impliquant des sources radioactives: • Sources découvertes, perdues ou volées; • Arrêt non programmé des activités autorisées; • Manipulation, transport, récupération et stockage de sources orphelines; • Stockage sécurisé des sources aux entrées du territoire national; • Surveillance des métaux de récupération; • Contrôle des mouvements des sources à haut risque;	ANRP	A partir du 1er trimestre 2008	Mission d'Expert	• CoC, § 18, 20[3] • CoC, § 9, 13 (b), 15, 19 (g), 22 (g) • Reference [6] • Reference [19]

TACHE	EXECUTEE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
• Sécurité et sûreté des sources stockées en routine dans des véhicules ou des sites appropriés.				
II.5. Mise en place des procédures d'inspection II.5.1. Programme d'inspection: II.5.1.1. Etablissement et approbation des tâches et responsabilités des inspecteurs dans l'exercice de leur fonction. II.5.1.2. Etablissement d'un programme d'inspection tenant compte de la nature du risque potentiel	ANRP	A partir du 1er trimestre 2008	Formation des inspecteurs Visites Scientifiques	• GS-R-1, § 5.14 – 5.17 [2] • CoC, § 20(h), 22(I,) 19(h) [3] • Reference [15] • Reference [6] • Reference [19]
II.5.1.3. Elaboration et adoption des procédures d'inspection appropriées aux types de pratiques	ANRP	A partir du 1er trimestre 2008	Fourniture des équipements d'inspection	• Reference [15]

TACHE	EXECUTEE PAR	PERIODE D'EXECUTION	APPORT DE L'AIEA	REFERENCES
II. 6. Veiller au respect de la réglementation, gestion des non conformités et application des sanctions II.6.1. Etablissement d'un système visant le respect de la règlementation en vigueur II.6.1.1. Elaboration et approbation des stratégies visant le respect de la réglementation incluant la coopération avec les autres institutions gouvernementales (justice, police, gendarmerie, etc)	ANRP et autres institutions gouvernementales	**A partir du 1er trimestre 2008**	Mise a disposition des documents	• GS-R-1, § 5.18 – 5.24 [2] • CoC, § 20 (i), 22 (j) [3] • Reference [15] • TecDoc 1526
II.7. Assurer la gestion des informations II.7.1. Collecte et diffusion de l'information: II.7.1.1. Elaboration et approbation des procédures pour la collecte et la diffusion de l'information auprès des utilisateurs de sources, des groupes professionnels et du public intéressés	ANRP, autres organismes interessés	A partir du 4eme trimestre 2007		• CoC, § 13 [3] • GS-R-1, § 3.3(6), (7), (11) [2]
II.8. Mise en place un système d'assurance qualité II.8.1. Programme de management de la qualité Elaboration et approbation d'un programme d'assurance qualité visant la révision périodique des procédures applicables à l'ANRP en vue de s'assurer de leur effectivité et performance.	ANRP	A partir du 1er trimestre 2008	RAF sur l'Assurance qualite	• GS-R-1, § 4.5 [2] • TECDOC-1090 [17] • ISO 9000 [18]

III. ACTIVITES TECHNIQUES D'APPUI				
III.1. Mise en place d'une unité de dosimétrie III.1.1. Equipement de l'unité III.1.1.1. Etude descriptive des équipements nécessaires III.1.1.2. Elaboration et mise en œuvre d'un plan d'équipement III.1.1.3. Formation du personnel	ANRP	A partir du 1er trimestre 2008	Visites scientifiques Fourniture d'équipements Voir Projet RAF 9032	
III.2. Mise en place de l'unité de radioanalyse Equipement de l'unité III.2.1. Etude descriptive des équipements nécessaires III.2.1.2 Elaboration et mise en œuvre d'un plan d'équipement III.2.1.3. Formation du personnel III.2.1.4. Elaboration des procédures	ANRP	A partir du 1er trimestre de 2008 A partir du 1er trimestre 2008	Visites scientifiques Fourniture d'équipements PCT CMR5014	
III.3. Mise en place de l'Unité de gestion des Déchets Radioactifs				
III.3.1 Equipement de l'unité III.3.1.1 Etude descriptive des équipements nécessaires III.3.1.2 Elaboration et mise en œuvre d'un plan d'équipement III.3.1.3. Formation du personnel	ANRP	A partir du 2eme trimestre 2008	Visites scientifiques Fourniture d'équipements	

III.3.1.4. Elaboration des procédures			Voir RAF9037	
III.4. Mise en place de l'unité de calibration/maintenance III.4.1 Equipement de l'unité III.4.1.1 Etude descriptive des équipements nécessaires III.4.1.2 Elaboration et mise en œuvre d'un plan d'équipement III.4.1.3. Formation du personnel III.4.1.4. Elaboration des procédures	ANRP	A partir du 1er trimestre 2008	Visites scientifiques Fourniture d'équipements CMR4002 RAF4017	