A GOOD NUCLEAR NEIGHBORS RELATIONSHIP

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Abstract

In December 1991 the Argentina-Brazil agreement on the "Exclusively Peaceful Use of Nuclear Energy" has entered into force. The agreement, inter alia, impose the control of all nuclear materials in all nuclear activities in both countries. To verify this commitment, the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) was created and the Common System of Accounting and Control of Nuclear Materials (SCCC) was established. This paper describes ABACC's structure, duties and resources and the main features of the SCCC. Finally, a summary of the safeguards' activities performed up to date is presented.

1.INTRODUCTION

During 1990 and 1991 an agreement was discussed and concluded between the Republic of Argentina and the Federative Republic of Brazil: "The Agreement for the Exclusively Peaceful Use of Nuclear Energy" (the Bilateral Agreement), which has been in force since December 1991.

Going back into the nuclear history of Brazil and Argentina, this agreement can be considered as the natural evolution of their cooperation in the nuclear field. This cooperation was confirmed in 1980 (agreement on the Peaceful Uses of Nuclear Energy, Buenos Aires, 1980), and gained a significant momentum since 1985, after the joint declaration of the former Presidents on nuclear policy, named the "Declaration of Foz do Iguaçu." This policy was continuously reinforced by both governments (Brasilia, 1986; Viedma, 1987; Iperó, 1988; Buenos Aires, 1990) even though the head of governments changed in both countries and economic problems came through. It should be emphasized that nuclear cooperation is only a small fraction of the global cooperation between Brazil and Argentina, which encompasses many areas, including a future common market involving other countries of the region.

To verify the control's commitment of the Bilateral Agreement the Brazilian-Argentine Agency of Accounting and Control of Nuclear Materials (ABACC) was created. The ABACC's objective is to administrate and apply the Common System of Accounting and Control of Nuclear Materials (SCCC), also established by the Bilateral Agreement. The SCCC is a comprehensive safeguard's system that is being applied in both countries with the purpose of verifying that all nuclear materials in all nuclear activities are not diverted to uses not authorized by the agreement.

2.ABACC'S STRUCTURE AND RESOURCES

ABACC's structure encompasses the Commission, its director body, and the Secretariat, its executive body. The Commission is composed by four members (two of them being appointed by each country) and meets at least in a quarterly basis. The Secretariat is formed by: a) professionals designated by de Commission (at present eight technical and two administrative professionals, including the Secretary and deputy Secretary); b) administrative personnel (four people), and c) the inspector's task force (about fifty people, being roughly appointed 50% by each country). The highest level Technical Officer of each country alternates annually as ABACC`s Secretary. The Secretariat has been organized in four technical areas (Operations, Planning and Evaluation, Accounting and Technical Support) and one area responsible for financial and administrative issues.

As set forth in the Bilateral Agreement, Brazilian inspectors carry out inspections in Argentina and Argentinean inspectors conduct inspections in Brazil. The inspectors do not work

permanently for ABACC but for their National Authorities or other official organizations in their countries and are convoked by ABACC whenever necessary. The staff of inspectors includes many people well experienced in safeguards' inspections, who usually carry out inspections at a national level. In addition, there are also experts on several areas of safeguard's interest (NDA, DA, operation and design of various types of facilities, equipment calibration, et-cetera). It should be noted that inspectors can be requested as consultants, not necessarily to carry out inspections and, in addition, also based on the Bilateral Agreement, especialized manpower, equipment or services can be provided by the countries upon request.

The economic support needed for the implementation of the SCCC and the functioning of ABACC was established in a general way by the Bilateral Agreement; both countries will share the costs on an equity basis. After several considerations it was agreed to support ABACC activities on a half to half basis. ABACC's regular operational budget was estimated at 2 million US dollars per year (this figure neither includes inspector's (consultant's) salaries, afforded directly by the countries, nor includes equipment). Even though ABACC started its activities in the middle of 1992, the budget for this year was established at 2 million US dollars. This was done taking into consideration initial headquarters inversion (including computer equipment), initial technical equipment acquisition (about 150,000 US dollars) and the need of having a "buffer" for ensuring the continuity of the activities. The 1993 budget has been established at 2.5 million US dollars, where half a million is for procuring equipment for inspection purposes (another equipment inversion of half million US dollars has been scheduled for 1994).

3. ABACC'S FUNCTIONS

ABACC'S functions embrace the Commission's and the Secretariat's roles.The main functions of the Commission are:

a) To supervise the functioning of the SCCC and the Secretariat.

b) To appoint the professional staff of the Secretariat and to approve the appointment of auxiliary staff.

c) To prepare the inspector's list among those proposed by the Parties.

d) To procure the economic resources for ABACC's Secretariat and to report to the countries on a yearly basis.

e) To establish its own rules and to approve the basic regulations of the Secretariat.

As the executive body of ABACC, the main functions of the Secretariat are:

a) To implement the Commission's directives and instructions and to perform the necessary activities for the implementation and administration of the SCCC.

b) To designate the inspectors who will carry out the inspection activities necessary for the implementation of the SCCC (among those of the list prepared by the Commission and taking into account the nationality as has been noted above).

c) To negotiate new implementation documents or modifications of the already existents (further approval by de Commission is required).

d) To evaluate reports and results of accomplished inspections.

e) To inform the Commission on a regular basis as well as immediately in special circumstances.

4. THE COMMON SYSTEM OF ACCOUNTING AND CONTROL OF NUCLEAR MATERIALS (SCCC)

4.1 THE CONCEPTION OF THE SYSTEM

The SCCC was conceived as a comprehensive safeguard's system to be implemented by a central executive body (the permanent staff of ABACC) which is financially and technically supported by the Parties to carry out its duties. The system requires the concurrence of efforts of Operators, National Authorities and ABACC. The National Authorities play a significant and special role in the implementation of the SCCC: besides the usual activities at state level, each of them is the natural channel through which ABACC requires the services needed to carry out control activities in the other country. With this conception, the SCCC requires strong National Authorities not only able to fulfill its responsibilities at a national level but also to support ABACC's activities (for instance, they need to expand their inspection capabilities to be able to provide ABACC with

the necessary support to carry out inspections in the other country). This "two way" role of the National Authorities is new and is the subject of several discussions and adjustments.

The technical support available from the two Parties embraces inspectors; consultants; working groups; special studies; training; equipment maintenance and calibration; preparation of standards, laboratory services and any other safeguard related study or service.

4.2 THE BASIC DOCUMENTS

Besides the Bilateral Agreement, the main documents that define the SCCC are the General Procedures and the Application Manuals. The Application Manuals are similar to the IAEA's Facility Attachments.

The General Procedures specifies the basic criteria and the requirements of the SCCC. Chapter 1 contains the criteria and the provisions for the starting point, exemption and termination of safeguards. It also includes the general rules for establishing the adequate level of accounting and control of nuclear material, that shall be later detailed in the Application Manual for each facility or other locations taking into account the usual parameters (nuclear material category, conversion time, inventory or annual throughput).Chapter 2 establishes the requirements at the state level for licensing nuclear facilities and other locations and the requirements regarding to relevant information for the SCCC (records, physical inventory and traceability of the measurement systems). Chapter 3 describes the procedures for the application of the SCCC at state level.

The provisions for the application of the SCCC by ABACC are in Chapter 4. It includes the requirements on the relevant information that shall be provided to ABACC (DIQ, ICR, MBR, PIL, notification of transfers from, to or between the State Parties). Additionally, Chapter 4 describes in a general way the purposes of the ABACC's inspections, the scope of the inspections, the access and the notice of inspections. The general provisions for the evaluation of the shipper-receiver differences and the MUF are also included in this Chapter.

The remainder Chapters refers to the following: Chapter 5 on ABACC,s inspectors; Chapter 6 on the revision of the document; Chapter 7 on the interim provision and Chapter 8 on Definitions.

5.ABACC'S PRESENT ACTIVITIES

ABACC's headquarters are located in the City of Rio de Janeiro, Brazil, as established by the Bilateral Agreement. After the signature of the headquarters agreement, ABACC started its work on July 1992 in the premises facilitated by the Brazilian Government. The experience accumulated by the organization until now is limited and problems and difficulties to overcome are still arising.

Considering that both countries have at present nuclear material under IAEA safeguards (INFCIRC 66 agreements), the Secretariat decided to assign priority to the control of the nuclear materials submitted only to the SCCC. A significant fraction of the design information of the facilities involved has already been verified and the discussion of the first Application Manuals started last April. The verification of the initial inventory started last March, after the reception of part of the portable equipment required.

Other relevant technical activities are:

a) Inspectors: Two introductory workshops took place in 1992, one in Argentina and another in Brazil. The Argentine National Authority, with ABACC's support, has organized an inspector's course that will take place in June this year (ABACC's Inspectors of both nationalities will be present).

b) Samples and Equipment transport: Arranges have been made to facilitate the transport of safeguards equipment and samples between both countries (some practical problems still remain)

c) Chemical and Isotopic Analysis of Samples: A program to implement a laboratory network (with the necessary intercalibration program) that will carry out chemical and isotopic analysis of ABACC' safeguards samples in both countries started last year (recently a group of consultants prepared a plan and an schedule for this activity).

Note: ABACC's policy request that samples taken in Argentina shall be analized in Brazil and vice-versa

d) Arrangements are in course for calibration and maintenance of safeguards equipment, for preparing and recording ABACC's seals.

e) The main documents above described have been revised or are under development.

f) A data bank has been organized in order to be able to record the initial inventory and any changes thereafter.

g) The inspection's system has been successfully put in operation though some problems still arise that although not significant from a technical point of view are quite time consuming.

6. SUMMARY AND CONCLUSION

Regarding the scale of the nuclear activities, the conception of the SCCC seems to have some advantages, particularly considering its simplicity and the lack of political issues. In addition, it must be emphasized the genuine interest of each neighbor in controlling the other and the possibility to use the best of the technical and human resources available in both countries. Taking into account all factors, it seems that this has been a good choice to start with. The experience gained during the first years will naturally indicate the evolution of the initial conception to better approaches.

To put fully operative the SCCC as soon as possible, looking forward for efficiency and effectiveness and finding the more suitable procedures, is a challenge that people working in ABACC want to face in order to contribute to "a good nuclear neighbor's relationship."

7. REFERENCES

"AGREEMENT BETWEEN THE REPUBLIC OF ARGENTINA AND THE FEDERATIVE REPUBLICA OF BRAZIL FOR THE EXCLUSIVELY PEACEFUL USE OF NUCLEAR ENERGY", IAEA, INFIRC/395, 26 NOVEMBER 1991.