INFORME ANUAL RELATÓRIO ANUAL ANNUAL REPORT

MIEMBROS DE LA COMISIÓN

Por la República Argentina

Ministro Eduardo Ainchil
Director General de Seguridad Internacional, Asuntos Nucleares y Espaciales del Ministerio de Relaciones Exteriores y Culto
Alterno: Dana Borojovich

Dr. Francisco Spano
Presidente de la Autoridad Regulatoria Nuclear
Alternos: Gabriel E. Terigi, Julián Gadano

Por la República Federativa de Brasil

Embajadora Glivânia Maria de Oliveira
Directora del Departamento de Organismos Internacionales del Ministerio de Relaciones Exteriores
Alterno: Consejero João Marcelo Galvão de Queiroz

Dr. Angelo Fernando Padilha
Presidente de la Comisión Nacional de Energía Nuclear
Alterno: Maria Cristina Lourenço

MEMBROS DA COMISSÃO

Pela República Argentina

Ministro Eduardo Ainchil
Diretor Geral de Segurança Internacional, Assuntos Nucleares e Espaciais do Ministério das Relações Exteriores e Culto
Suplente: Dana Borojovich

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Pela República Federativa do Brasil

Embaixadora Glivânia Maria de Oliveira
Diretora do Departamento de Organismos Internacionais do Ministério das Relações Exteriores
Suplente: Conselheiro João Marcelo Galvão de Queiroz

Dr. Angelo Fernando Padilha
Presidente da Comissão Nacional de Energia Nuclear
Suplente: Maria Cristina Lourenço

MEMBERS OF THE COMMISSION

On behalf of the Republic of Argentina

Ministro Eduardo Ainchil
General Director of the International Security, Nuclear and Space Affairs of the Ministry of Foreign Affairs and Worship
Alternate: Dana Borojovich

Dr. Francisco Spano
President of the Nuclear Regulatory Authority
Alternates: Gabriel E. Terigi, Julián Gadano

On behalf of the Federative Republic of Brazil

Ambassador Glivânia Maria de Oliveira
Director of the Department of International Agencies of the Ministry of Foreign Affairs
Alternate: Conselheiro João Marcelo Galvão de Queiroz

Dr. Angelo Fernando Padilha
President of the Brazilian Commission of Nuclear Energy
Alternate: Maria Cristina Lourenço

Message from the Secretary

The Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC), in accordance with article XI, item i, of the Agreement between the Federative Republic of Brazil and the Argentine Republic for the exclusively peaceful use of nuclear energy, and complying with that established in article 16, item h, of the Regulation of the Secretariat of ABACC, is pleased to present its 2012 ANNUAL REPORT.

This report maintains the format adopted from 2007 onwards. It is subdivided according to the areas of activity, in order to facilitate comprehension.

To comply with its mission of the efficient and effective application of nuclear safeguards, the ABACC sectors performed the routine activities of preparation, execution, support and evaluation of the inspections carried out in 2012.

ABACC performed routine and ad-hoc inspections in the nuclear facilities of both the countries in coordination with the International Atomic Energy Agency and the national authorities. During the year, 70 inspections were performed in Argentine facilities and 50 in Brazilian facilities. This required an effort of 569 person-days in the field and a total availability of 1,139 person-days.

As a result of this work, ABACC can confirm that Argentina and Brazil have performed their activities in the nuclear field in full compliance with the commitments assumed in the area of nuclear safeguards and nonproliferation.

The Secretariat wishes to emphasize that these results were only possible due to the dedication and professionalism of its officers, inspection team and support staff.

Among the important activities performed in 2012, special mention deserves to be made of the replacement, in the Laboratório de Enriquecimento Isotópico da Unidade de Enriquecimento Almirante Álvaro Alberto and in the Planta Piloto para Enriquecimento de Urânio, of the outdated EMOSS surveillance system by the Next Generation Surveillance System, which has DCM-C5 cameras and DCI/DCR-1 data recorders, which are the state of the art surveillance equipment for safeguards.

At the Central Nuclear Embalse, regular maintenance was carried out on the DMOS surveillance system and the detectors of the Core Discharge Monitor were replaced, which is a subsystem of the Integrated Counting System of the Spent Fuel Elements.

At ABACC, the updating work continued with the accounting database to receive the accounting data from the Argentine and Brazilian facilities. This data is now produced by the "e-Gamma" program, which was developed by Comissão Nacional de Energia Nuclear and by the "ICAIFE" program, developed by the Autoridad Regulatoria Nuclear.

Continuity was also provided to the project to update and improve the "Operations Database", which is ready for migration to an environment integrated to the Internet. This project will improve the interface of the users, mainly the inspectors, with the database. It will increase the integration between the different sectors of ABACC, improving accessibility and increasing the security of the ABACC databanks.

The development of an application for the digital management of documents between ABACC and the IAEA, with a web interface, was concluded. It is expected to enter into operation at the start of

2013. This platform can also be used to provide access to documents of common interest to authorized users.

The training of its personnel has always been important in the history of ABACC. To achieve this, a policy was defined for the qualification of its officials and team of inspectors. During 2012, several training courses were held, taking into consideration the large number of Argentine and Brazilian inspectors joining the ABACC team of inspectors in recent years.

ABACC participated in several international forums, presenting technical studies and institutional disclosure. Highlights were the participation in the meetings of the Board of Governors of the IAEA and the presentation made at the 56th General Conference of the IAEA, which was held in Vienna in September.

Due to their importance, the coordination meetings held with the parties of the Quadripartite Agreement are highlighted. These are essential forums for the good management of this Agreement and of the Common System of Accounting and Control of Nuclear Materials, whose management is the main responsibility of ABACC. In September, the representatives of the countries, of ABACC and of the IAEA held the 12th Liaison Committee Meeting of the Quadripartite Agreement, when several subjects concerning the implementation of safeguards were discussed.

With respect to the policy of the periodic renewal of its teams, ABACC received the new Argentine Officer of Planning and Evaluation. The Secretariat welcomes Sonia Fernández Moreno, in the certainty that her recognized professional standing will contribute to the continued improvement of our work.

The ABACC Secretariat also wishes to offer Osvaldo Calzetta Larrieu, who returns to Argentina, the thanks and the recognition for the important work that was developed during the period in which he was an officer of ABACC.

21 years after its creation, ABACC can today show the world the good experience that it has in the compliance with the mission that it was entrusted. During this period, ABACC has constituted a bi-national organism for the application of safeguards, with great international credibility, as well as being one on the main contributors to the international system of nonproliferation.

The Secretariat hopes that the reading of this report enables a clear understanding of the activities developed by the Agency during 2012 and that, at the same time, it demonstrates that ABACC is complying efficiently and effectively with its mission.

Antonio Abel Oliveira
SECRETARY

Activities of the Commission

The Commission of ABACC is composed of two members from Argentina and two members from Brazil. As the highest hierarchical body of ABACC, it is responsible for providing the technical and policy guidelines to be applied by the Agency.

The principal members from Brazil were Ambassador Glivânia Maria de Oliveira and Dr. Angelo Fernando Padilha; from Argentina they were Minister Gustavo Eduardo Ainchil and Dr. Francisco Spano.

In accordance with that stipulated in the Regulations of the Commission, three ordinary meetings were held: one in April, another in August and the last one in November.

At the April meeting, the Commission approved the Secretariat-Commission version of the Annual Report and received the version to be distributed for the public for approval. The 2012 budget estimate was presented to the members of the Commission in addition to the economic and financial reports with the accounting for the period.

At the August meeting, the 2013 Work Plan and Budget was presented and approved and also the appointment of the Argentine Officer of Planning and Evaluation.

At the November meeting, several items referring to the application of safeguards were discussed, among them the results of the 12nd Liaison Committee Meeting of the Quadripartite Agreement, which took place in September. The Secretariat made a presentation on the "Application of Safeguards Using the State Level Concept", providing more information with respect to the subject. The cooperation between ABACC and the European Commission was also an extensively discussed item at the meeting, where it was stated that the projects to be developed in conjunction are important.

At the end of this meeting, in accordance with the regulatory procedure regarding the rotation of the members of the Secretariat, the Minutes for the Transfer of the Secretariat were signed. Dr. Odilon Marcuzzo do Canto became the secretary of ABACC and Lic. Antonio Abel Oliveira became the deputy secretary.

Safeguards Application

Mission of ABACC

In 2012, the Secretariat of ABACC complied in full with the mission to apply nuclear safeguards in Argentina and Brazil. It satisfied all the criteria of the application of safeguards established in the Common System of Accounting and Control of Nuclear Materials - SCCC and coordinated with the International Atomic Energy Agency - IAEA in order that both organizations could achieve their conclusions with respect to the control of nuclear material and the correct use of the facilities under safeguards.

In order to obtain this positive result, all the sectors of ABACC performed the activities of preparation, execution, technical support and evaluation of the inspections. The databanks were updated, the maintenance of the equipment was carried out regularly and the meetings for the coordination and implementation of the safeguards agreements were held.

Performed Inspections

Routine and ad-hoc inspections were performed, which were coordinated between ABACC, the IAEA and the national authorities of Argentina and Brazil.

There were 70 inspections in Argentina and 50 inspections in Brazil. These inspections required an effort of 569 person-days in the field and a total availability of 1,139 person-days. The work of the inspectors in the preparation of the inspections, the monitoring of the technical activities with respect to the safeguards equipment and the preparation of the inspection reports were included in the total availability.

Main Activities Conducted in Argentina

Fuel Production

Fábrica de Elementos Combustibles Nucleares of the company Combustibles Nucleares Argentinos S.A.

Short Notice Random Inspections and a Physical Inventory Verification inspection were performed.

Complejo Fabril Córdoba

The verification of the scraps and the domestic transfers of the produced nuclear material were performed in the inspections. At the end of the period of the accounting of the nuclear material the conclusion was that the percentage of the verified domestic transfers was satisfactory to ABACC.

Generation of Nuclear-Electric Energy

Central Nuclear Embalse

A large part of the inspection effort in Argentina was due to the carrying out of the spent fuel transfer campaign from the storage pool to the silos. This effort will be reduced when the Unattended System enters into operation.

Central Nuclear Atucha II

ABACC and the IAEA carried out the project and installation of the Integrated Fuel Monitor that will monitor the flow of spent fuel between the reactor and the storage pool, and of the optical surveillance system. These systems should be operational at the time of the commissioning.

Nuclear Technology Development

Planta Piloto de Enriquecimiento de Uranio in Pilcaniyeu

The modifications that had been proposed in the review of the Design Information Questionnaire were confirmed in the Design Information Verification inspections.

Main Activities Conducted in Brazil

Fuel Production

Fábrica de Combustível Nuclear – Reconversão e Pastilhas, Componentes e Montagem das Indústrias Nucleares do Brasil

Short Notice Random Inspections, a Physical Inventory Verification Inspection and a Design Information Verification Inspection were performed.

Fábrica de Combustível Nuclear – Enriquecimento das Indústrias Nucleares do Brasil

Announced and unannounced inspections were performed to comply with the safeguards targets.

Generation of Nuclear-Electric Energy

Centrais Nucleares Angra 1 and Angra 2

Routine inspections were performed and the reloading of the core of the power reactors was monitored.

Nuclear Technology Development

Centro Tecnológico da Marinha em São Paulo

Unannounced inspections were performed at the enrichment plants of the Centro Experimental Aramar. At the enrichment plants, the surveillance systems were replaced by the Next Generation Surveillance System, which provides greater reliability and the possibility for authentication.

Unidade de Produção de Hexafluoreto de Urânio

The Secretariat of ABACC has been monitoring and applying safeguard measures during the commissioning of this facility. The verification of the equipment relevant to safeguards was performed during these stages.

Main Activities Developed at ABACC headquarters

- **Updating of the Accounting Databank** to receive the accounting data from the Argentine facilities, generated by the ICAIFE program, and from the Brazilian facilities, generated by the e-Gamma program.
- **Finalization of the development of the Database of Operations** for migration to an environment integrated to the internet. This application will improve the interface of the users, mainly the inspectors, with the database. It will increase the integration between the different sectors of ABACC, improving accessibility and increasing the security of the ABACC databanks.
- **Finalization of an application for the digital management of documents between ABACC and the IAEA,** with a web interface. This platform can also be used to provide access to documents of common interest to authorized users.
- **Preparation of tertiary standards of natural and enriched uranium** for the calibration of non-destructive analysis equipment. In addition to ABACC, Argentine and Brazilian institutions participated in the manufacture of the standards. They will be approved by the IAEA for common use between the agencies.

Advances in the Application of Safeguards

Verification of the Nuclear Material in Conversion Plants

There were tripartite meetings to discuss, within the framework of the Quadripartite Agreement, the situation of the verification of the nuclear material at the starting point of the safeguards and the implementation of Short Notice Random Inspections in the conversion plants. ABACC and the working groups for Argentina and Brazil discussed the subject and presented technical propositions for the establishment of the methods to be used in this verification. As a result, these groups presented instruments that could be used and the methodology to be employed in the safeguards approach that allow this type of inspections.

Application of Safeguards in Uranium Enrichment Facilities

Fábrica de Combustível Nuclear – Enriquecimento of the Indústrias Nucleares do Brasil. Progress was obtained in the implementation of the safeguards methodology adopted for the verification of this plant during the unannounced inspections. The inspectors from ABACC and the IAEA are being trained to apply the procedures to be used.

Laboratório de Desenvolvimento de Elementos de Separação Isotópica of the Centro Tecnológico da Marinha em São Paulo. The activities that will be performed in the Physical Inventory Verification inspections and in the Design Information Verification Inspections were discussed, such as the frequency, the period of notification and the scope of the Short Notice Random Inspections.

Planta Piloto de Enriquecimiento de Uranio in Pilcaniyeu. Progress was obtained in the discussions for the preparation of the safeguards approach to be applied in this plant.

Transmission of the State of Health of Safeguards Equipment

The use of the technique of Transmission of the State of Health of safeguards equipment is being negotiated with the national authorities of Argentina and Brazil, for specific surveillance systems of the two countries.

There still remain a few items to be agreed in the use of the system. ABACC and the IAEA are providing the required explanations in order to find the solutions for the use of this technique.

System for Monitoring and Recording of Weight of UF_6 Cylinders

ABACC performed tests with the software that manages this system with a view to its application at the **Fábrica de Combustível Nuclear - Enriquecimento** das Indústrias Nucleares do Brasil. A new version of the software was developed from these tests. ABACC is awaiting the approval of the national authority and of the operator for the installation of the system.

Non-Destructive Measures

The detectors of germanium and sodium iodide, used for the measurement of the uranium enrichment, are being revised and modernized.

ABACC-Cristallini Method

This method is used in the sampling of UF_6 and it is based in the adsorption capacity in alumina pellets. It replaces very advantageously with less cost and amount of liquid wastes, the traditional technique of sampling with ASTM ampoules. The method is being approved by the IAEA and is the process of qualification in ASTM International.

Management of the Quadripartite Agreement and of the Common System for the Accounting and Control of Nuclear Materials

Coordination of the Activities between ABACC, Argentina, Brazil and the IAEA

The **13rd Liaison Sub-Committee Meeting** was held at the headquarters of the Autoridad Regulatoria Nuclear and the **12nd Liaison Committee Meeting** was held at the headquarters of the International Atomic Energy Agency. At the Liaison Committee Meeting, important subjects were highlighted with respect to the application of safeguards in the two countries, such as the Design Information Verification activities, including the request of access beyond the strategic points, the procedures for the exemption of nuclear material under safeguards and for the taking of environmental samples in the installations.

Coordination of the Activities between ABACC and the National Authorities

In meetings between ABACC and the national authorities, the important subjects that were part of the agenda of the Liaison Sub-Committee and Committee meetings were debated. Furthermore, the Secretariat of ABACC discussed items that needed to be standardized with the countries for the correct application of the Common System of Accounting and Control of Nuclear Materials.

In the meetings and videoconferences held with the **Autoridad Regulatoria Nuclear**, the highlighted subjects were the preparation of the new safeguards approach of the **Planta Piloto de Enriquecimiento de Uranio**, the implementation of the Unattended Monitoring System at the Central Nuclear Embalse, the installation and operation of the safeguards equipment, the preliminary plan for the verification of the initial load of the core of the **Central Nuclear Atucha II** and the progress obtained by the work group for the application of the safeguards measures at the Planta de Conversión a UO_2.

With the **Comissão Nacional de Energia Nuclear**, in the meetings held to discuss matters referring to the enrichment plant of the **Fábrica de Combustível Nuclear – Enriquecimento** das Indústrias Nucleares do Brasil, the procedures to be used during the Unannounced Inspections, the monitoring during the commissioning of the new cascades and improvements to the surveillance system of the plant were discussed. With respect to the **Unidade de Produção de Hexafluoreto de Urânio**, the special verification plan of the nuclear material during the commissioning stages was discussed. The modernization activities of the surveillance systems installed in the enrichment plants in Aramar, of the **Centro de Tecnologia da Marinha em São Paulo**, were also coordinated.

Coordination of the Activities between ABACC and the IAEA

The main subjects debated at the meetings were the application of safeguards in Argentina and Brazil, the cooperation between the two agencies, mainly of the inspectors in the field, the common use of equipment and of the inspection manuals and procedures.

The training program for 2013 was another subject that was considered to be very important in this cooperation. Subjects that should form part of the agenda of the courses were defined, such as: operation of the unattended systems, procedures in the unannounced inspections, containment and surveillance and the use of measurement equipment.

In order to increase the cooperation between the agencies, ABACC proposed to the IAEA the use of results obtained, such as, the results of the destructive measurements, the SJAR software for the accounting audits and the analysis procedure of the Design Information Questionnaires. Both the agencies are establishing the requirements for this collaboration.

Situation of the Design Information Questionnaires and the Application Manuals

The Design Information Questionnaires and the Application Manuals are official documents that the inspectors use during the inspections. ABACC and the IAEA revise these documents based on the information obtained during the inspections or at the request of the operators of the nuclear installations under safeguards. This year, a total of 8 Design Information Questionnaires from the nuclear installations of the two countries were revised.

Presence of ABACC at Events

INMM Workshop "Evolving The IAEA State Level Concept"
Charlottesville, United States

Workshop "Gas Centrifuge Enrichment Plants" Technology Stakeholders
Charlottesville, United States

34TH ESARDA Annual Meeting
Luxembourg, Luxembourg

4TH International Meeting on Next Generation Safeguards: Implementing Comprehensive Safeguard Agreement and Additional Protocol
Hanoi, Vietnam

Reunião da Junta de Governadores da AIEA
Vienna, Austria

53RD INMM Annual Meeting
Orlando, United States

Work presented:

- Reliable Safeguards Verification Measurements Results and the International Target Values 2010, in conjunction with the Comissão Nacional de Energia Nuclear
- Graphical User Interface Software for Gross Defect Detection at the Atucha I Plant, in conjunction with the Lawrence Livermore National Laboratory

2012 International Nuclear Nonproliferation and Security Symposium
Seoul, South Korea

Expert Workshop for Review of the Draft Safeguards by Design for Reactor Facilities
Vienna, Austria

56TH IAEA General Conference
Vienna, Austria

Strengthening Technical Capability

Basic Safeguards Course

Objective: to consolidate the basic knowledge concerning the Common System of Accounting and Control of Nuclear Materials and the Quadripartite Agreement and to reinforce the fundamental concepts that guide the joint application of the ABACC-IAEA safeguards.

11 Argentine inspectors were trained.

Collaboration: Autoridad Regulatoria Nuclear.

Systematic and Individual Training in Nuclear Measurement Systems with non-Destructive Technology

Objective: to train inspectors in the use of non-destructive measurement equipment.

Officials from ABACC and representatives from the national authorities participated.

Collaboration: Laboratório de Salvaguardas da Comissão Nacional de Energia Nuclear.

ABACC-IAEA Joint Audit of Accounting Records (SJAR)

Objetivo: to present the updated version of the SJAR software and the CIOSP database of the IAEA.

11 Argentine inspectors, 8 Brazilian inspectors and 8 inspectors from the IAEA were trained.

Inspection Procedures Applied to the Brazilian Enrichment Plants

Objective: to ensure the joint application of the inspection procedures.

5 Argentine inspectors and 3 inspectors from the IAEA were trained.

Collaboration: Comissão Nacional de Energia Nuclear, Indústrias Nucleares do Brasil, Centro Tecnológico da Marinha em São Paulo, International Atomic Energy Agency, and Oak Ridge National Laboratory.

Training for Containment and Surveillance Systems

Objective: : to revise the concepts of the containment systems and the operational practices in the application of containment measures.

10 Argentine inspectors and 10 Brazilian inspectors participated.

Collaboration: Autoridad Regulatoria Nuclear and Sandia National Laboratories.

Technical Cooperation

The exchange of experiences and the development of projects with international partners in the area of safeguards enable ABACC to monitor and participate in the evolution of the technologies applied. Accordingly, it has developed projects with the following partners:

United States Department of Energy

Projects in Progress:

- **Action Sheet 15** - Development of Environmental Sampling Capability in Support of the Regional Agreement between Argentina and Brazil
  Objective: to develop the technical capabilities and staff training of the Argentine and Brazilian laboratories in the techniques of environmental sampling.

- **Action Sheet 21** – Laboratory Quality Assurance through Analytical Standards and Sample Exchange Programs
  Objective: to develop exercises of inter-comparison of results of analyses of samples of nuclear material, for the evaluation and assessment of the quality of the laboratories that support the network of ABACC in Brazil and Argentina.

- **Action Sheet 22** - Cooperation on Developing a Spent Fuel Gross Defect Detection System at ATUCHA-I
  Objective: to develop non-destructive testing systems, including software and instruments, for the verification of spent fuel kept in places of difficult access in the storage pools.

- **Action Sheet 23** – Cooperation on Training for ABACC
  Objective: to enable the participation of specialists from the laboratories of the United States Department of Energy to provide support to the training courses offered by ABACC.

- **Action Sheet 24** – Developing a System for ABACC to Function as a Regional Center for Education and Training on Safeguards
  Objective: to prepare the documentation, including the course summaries, and the physical and technical infrastructure requirements to enable ABACC to become a training center for safeguards inspectors.

- **Action Sheet 25** - Secure Remote Access for ABACC
  Objective: to prepare documentation with guidelines that provides increased security in the information technology network of ABACC and greater reliability in the communications used.

- **Action Sheet 26** - Evaluation of the "ABACC-Cristallini Method" for sampling UF_6 for Isotopic Determination
  Objective: to register the ABACC-Cristallini Method with ASTM International.

With the European Commission

Projects in Progress:

- **Development and use of the 3D LFR laser system for the verification of physical alterations in pipes and safeguards equipment**
  Objective: To develop a technique using laser measurement that is able to identify physical alterations in the nuclear facilities under safeguards.

- **Use of ultrasonic seals in spent fuel kept in difficult access locations**
  Objective: To develop a containment system, using ultrasonic seals, that is able to guarantee the control of safeguards of spent elements in fuel storage pools.

With the Korea Institute of Nuclear Nonproliferation and Control

Approved Projects

- **Cooperation and Training**
  In this project, representatives of ABACC and KINAC are participating in safeguards courses offered by the two institutions.

- **Cooperation on Interchanging Safeguards Concepts on How to Improve the Collaboration between R/SSAC Systems and IAEA**
  This project seeks the exchange of experiences in the cooperation with the International Atomic Energy Agency for the application of nuclear safeguards.

Institutional Activities

The secretaries participated in the events of the nuclear sector regularly organized, such as the one of the European Safeguards Research & Development Agency - ESARDA, of the Institute of Nuclear Materials Management – INMM and of International Atomic Energy Agency.

ABACC received the invitation to participate in the commemoration of the 45th anniversary of the signing of the Treaty of Tlatelolco, held in February in Mexico City. ABACC was also present in the workshop "Brazil and the Global Nuclear Order", in May, in Rio de Janeiro, which was sponsored by the Carnegie Endowment for International Peace and by the Fundação Getúlio Vargas.

With respect to the activities of the 20 year commemoration of ABACC, the DVD produced during the "Seminar of the 20 years of ABACC", which was supported by the Fundação Alexandre de Gusmão, was updated to include subtitles in Portuguese, Spanish and English. This DVD was distributed to the members of the Commission at the November meeting.

ABACC, as a bi-national agency responsible for nuclear safeguards, continued to attract the interest of the academic community. This year, there was a visit by two students: one from the Monterey Institute of International Studies, specializing in terrorism and nonproliferation and the other from the Woodrow Wilson School of Public and International Affairs – National Security Policy, Nuclear Nonproliferation of Princeton University.

We were visited by Prof. Dr. Bernd Kubbig, of the Peace Research Institute Frankfurt, by Mr. James Solit, the current representative of the United States Department of Energy with ABACC in the Permanent Coordinating Group, and a delegation from the Japanese Consulate in Rio de Janeiro.

Administrative and Financial Activities

The administrative and financial operations of ABACC, in 2012, once again produced favorable results. The budget estimate presented by the Secretariat and approved by the Commission and their success in providing the Secretariat with the required economic and human resources deserve to be highlighted.

The continuity of a focused policy to optimize and control the resources of the institution contributed to this satisfactory result; in particular, the multiplicity of internal evaluations and controls, the permanent supervision of the secretaries and the systematic and frequent supply of information to the Commission of the most important aspects of all sectors of ABACC, such as the evolution of the economic resources, the accounting records, the financial operations and the assets of the agency.

The administrative and financial activities were conducted in accordance with the current rules. In compliance with the Financial Regulation of ABACC, the administrative sector was submitted to an independent external audit in January and February 2013. The auditors examined the financial operations, the accounting books and records and the supporting documentation, in agreement with the standards used in Brazil, which were extended and increased where judged necessary. The auditors concluded that the accounting statements suitably represented the assets and financial position of ABACC and they declared that they found no aspect or evidence that could compromise them.

The following table indicates the important amounts in the 2012 accounts. It can be seen that the total expenses amounted to 90% of the predicted budget and that, of this percentage, 92% corresponded to costs and 8% to investments. An objective comparison, made with the approved budget, confirms that the costs were on average 7% less than the budgetary forecast and that the investments were 63% of this forecast.

Income Summary
At december 31, 2012

INCOME	**4.970.500,00**
Contribution from the Governments of Argentina and Brazil	**4.970.500,00**
EXPENSES	**4.337.439,96**
Expenses budgeted for the application of safeguards	**4.090.207,72**
Balance of financial operations	**-18.686,12**
Depreciation of assets	**265.918,36**
SURPLUS FOR THE YEAR	**633.060,04**
INVESTMENTS	**375.651,28**
Acquisition of equipment, instruments and software	**375.651,28**
TOTAL ASSETS	**4.197.390,91**
Current	**3.449.984,66**
Available funds	**1.828.208,63**
Credits and advance payments	**1.621.776,03**
Fixed and intangible assets	**747.406,25**
TOTAL LIABILITIES	**4.197.390,91**
Accounts payable	**181.866,54**
Net assets	**4.015.524,37**
Surplus from previous years	**3.382.464,33**
Surplus for 2012	**633.060,04**

(amounts expressed in US$)

Outlook for 2013

Among the main non-routine activities that ABACC seeks to perform in 2013, the following are highlighted:

- Monitoring of the dry transfers of spent fuel to the silos at the Central Nuclear Embalse, using the unattended system in conjunction with the interim and unannounced inspections that will replace the current regime of permanent inspections in the campaigns;
- Installation and operation of the safeguards equipment at the Central Nuclear Atucha II, which has a forecasted commissioning in 2013;
- Finalization of the safeguards approach of the Planta de Conversión a UO_2 in Córdoba, using Short Notice Inspections;
- Monitoring and commissioning of the Unidade de Produção de Hexafluoreto de Urânio in Iperó, and progress in the discussion and application of the safeguards approach.

ABACC will continue developing the safeguards approaches and the implementation of safeguards in the new plants, with emphasis on the expansion of the Planta Piloto de Enriquecimento de Urânio of the Indústrias Nucleares do Brasil and on the experimental reactors at the Laboratório de Geração Núcleo-elétrica and the Proyecto Reactor Prototipo - CAREM 25.

With respect to the technical evolution regarding safeguards, the ABACC Secretariat will be alert to new developments that may occur in the international scenario, continually seeking to update and improve its work.

ABACC will continue its verification work for the exclusively peaceful use of nuclear energy in Argentina and Brazil, in accordance with the nonproliferation policy adopted by the two countries and monitoring the evolution and the technological developments in the application of nuclear safeguards.

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Inspetores da ABACC
ABACC Inspectors

Inspectores Argentinos
Inspetores Argentinos
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Brazilian Inspectors

André Luís Nunes Barbosa
Celia Christiani Paschoa Portoghese
Cláudio Luiz de Oliveira
Cleber Lopes de Oliveira
Cyro Teiti Enokihara
Dilmar Araújo Junior
Dulce Maria Daher
Fábio Cordeiro Dias
Florentino Menchero Palacio
Francisco José de Oliveira Ferreira
Geraldo Renha Junior
Gevaldo Lisboa de Almeida
Hebe Peixoto Schirmer
Irineu do Amaral Gurgel Filho
Ivan José Tomazelli
Ivan Santos
João Batista Borges
Jorge Eduardo Silva Cardoso Santos
José Afonso Barros Filho
José Augusto Perrotta
José Cláudio Pedrosa
José da Silva Guimarães
José Gláucio Motta Garone
José Henrique Buchmann
José Roberto Tavares de Paiva
José Wanderley Santana da Silva
Leonardo Souza Dunley
Lilia Crissiuma Palhares
Luiz Antônio da Silva
Luiz Antônio de Mello
Marcos Sodré Grund
Maria Clarisse Lobo Iskin
Max Teixeira Facchinetti
Miriam Dias Pacheco
Olga Y. Mafra Guidicini
Orpet José Marques Peixoto
Pedro Dionísio de Barros
Ricardo Gonçalves Gomide
Sergio Barros Paixão
Silvio Gonçalves de Almeida
Walter Pereira
Willians Roberto Baldo

Inspectores Consultores
Inspetores Consultores
Senior Technical Inspectors

Bernardino Pontes
Carlos Feu Alvim
Fernando da Costa Magalhães
Francisco de Assis Brandão
Laércio Antônio Vinhas

Instalaciones Argentinas sujetas al Acuerdo Cuatripartito
Instalações Argentinas Sujeitas ao Acordo Quadripartite
Argentine Facilities under the Quadripartite Agreement

NOMBRE/NOME/NAME
Bunker de Almacenamiento
Central Nuclear Atucha I
Central Nuclear Atucha II (En construcción) (Em construção) (Under construction)
Central Nuclear Embalse
Circuito Experimental de Alta Presión
Circuito Experimental de Baja Presión
Departamento de Instrumentación y Control
Depósito Central de Material Fisionable Especial
Depósito Central de Material Fisionable Especial Irradiado
Depósito de Material Nuclear
Depósito de Uranio Enriquecido
División Productos de Fisión
División Materiales Nucleares
Fábrica de Elementos Combustibles Nucleares
Fábrica de Elementos Combustibles - Reactores de Investigación
Facilidad de Almacen. de Combustibles Irradiados de Reactores de Investigación
Facilidad Experimental de Conversión por Vía Seca
Laboratorio Alfa
Laboratorio de Química Analítica en Medios Activos
Laboratorio de Física Nuclear
Laboratorios de la Gerencia de Química
Laboratorio de Nanoestructura
Laboratorio de Química Analítica
Laboratorio de Recuperación de Uranio Enriquecido
Laboratorio de Salvaguardias
Laboratorio Facilidad Radioquímica
Laboratorio Materiales Fabricación Aleaciones Especiales
Laboratorio para Ensayos Post-Irradiación
Laboratorio Mock Up
Laboratorio Triple Altura
Material Nuclear en Usos No Nucleares

NOMBRE/NOME/NAME
Planta de Conversión a Hexafluoruro de Uranio
Planta de Conversión a UO_2
Planta Piloto de Enriquecimiento de Uranio • MBA 1: Almacenamiento • MBA 2: Proceso
Planta de Fabricación de Elementos Combustibles para Reactores de Investigación
Planta Experimental de Materiales Combustibles y Pulvimetalurgia
Planta de Fabricación de Polvos de Uranio
Planta de Producción de Polvos de Uranio
Proyecto Reactor Prototipo CAREM 25
Reactor Argentino 0
Reactor Argentino 1
Reactor Argentino 4
Reactor Argentino 6
Reactor Argentino 8
Reactor Argentino 3
Reactor Multiproposito Argentino
Tecnología Nuclear Innovativa

Instalaciones Brasileñas Sujetas al Acuerdo Cuatripartito
Instalações Brasileiras Sujeitas ao Acordo Quadripartite
Brazilian Facilities under the Quadripartite Agreement

NOMBRE/NOME/NAME
Arranjo Grafite-Urânio Subcrítico
Armazenagem ARAMAR • MBA1: Estocagem • MBA2: Transferência Gasosa
Central Nuclear Almirante Álvaro Alberto – Unidade 1
Central Nuclear Almirante Álvaro Alberto – Unidade 2
Central Nuclear Almirante Álvaro Alberto – Unidade 3 (En construcción) (Em construção) (Under construction)
Coordenadoria de Desenvolvimento e Tecnologia de Combustíveis (IPEN-CNEN/SP)

NOMBRE/NOME/NAME
Fábrica de Combustível Nuclear - Enriquecimento • MBA1: Estocagem • MBA2: Processo
Fábrica de Combustível Nuclear – Reconversão e Pastilhas / Componentes e Montagem
Laboratório de Desenvolvimento de Elementos de Separação Isotópica • MBA1: Estocagem, Purificação e Transferência, Tratamento de Rejeito • MBA2: Laboratórios • MBA3: Processo
Laboratório de Desenvolvimento de Instrumentação e Combustível Nuclear
Laboratório de Enriquecimento Isotópico da Unidade de Enriquecimento Almirante Álvaro Alberto
Laboratório de Espectroscopia a Laser • MBA1 – Estocagem, Laboratórios • MBA2 – Processo
Laboratório de Geração Núcleo-elétrica
Laboratório de Materiais e Combustível Nuclear – (CDTN/CNEN-MG)
Laboratório de Materiais Nucleares
Laboratório de Salvaguardas
Planta Piloto de Enriquecimento de Urânio • MBA1: Estocagem • MBA2: Processo
Projeto Reprocessamento (IPEN-CNEN/SP)
Reator Argonauta (IEN/CNEN-RJ)
Reator IEA-R1
Reator IPR-R1
Reator Multipropósito Brasileiro
Subcrítica Universidade Federal de Pernambuco
Unidade Crítica IPEN/MB-01
Unidade de Produção de Hexafluoreto de Urânio

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Contabilidad de Materiales Nucleares
Luis Alberto Giordano; Silvio Gonçalves de Almeida

Operaciones
Carlos Rodríguez; Maria Clarisse Lobo Iskin

Apoyo Técnico
Erwin Gaspar Galdoz; Geraldo Renha

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Rubén Gerardo Novo

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Selma Chi Barreiro

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Daniel Giustina; Leonor Onorati

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SECRETARIAT OF ABACC

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Antonio Abel Oliveira

Deputy secretary
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Garantizando el uso
pacífico de la energía nuclear
en Argentina y Brasil

Garantindo o uso
pacífico da energia nuclear
na Argentina e no Brasil

Guaranteeing the peaceful
use of nuclear energy
in Argentina and Brazil

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