

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

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

Guaranteeing the peaceful
use of nuclear energy
in Argentina and Brazil

Membros da Comissão

Pela República Federativa do Brasil

Embaixador Carlos Sérgio Sobral Duarte,
Ministra Glivânia Maria de Oliveira
Diretor/a do Departamento de
Organismos Internacionais do Ministério
das Relações Exteriores
Suplente: Ministro Ricardo Maschietto Ayrosa

Dr. Odair Dias Gonçalves,
Dr. Angelo Fernando Padilha
Presidente da Comissão Nacional
de Energia Nuclear
Suplente: Dra. Maria Cristina Lourenço

Pela República Argentina

Ministro Gustavo Eduardo Ainchil
Diretor Geral de Segurança Internacional,
Assuntos Nucleares e Espaciais do
Ministério das Relações Exteriores,
Comércio Internacional e Culto
Suplentes: Secretário Lorena Capra,
Secretário Dana Borojovich, Ministro Alberto Dojas

Dr. Francisco Spano
Presidente da Autoridade Regulatoria Nuclear
Suplentes: Lic. Gabriel Terigi, Lic. Elena Maceiras

Miembros de la Comisión

Por la República Federativa de Brasil

Embajador Carlos Sérgio Sobral Duarte,
Ministra Glivânia Maria de Oliveira
Director/a del Departamento de
Organismos Internacionales del Ministerio
de Relaciones Exteriores
Alterno: Ministro Ricardo Maschietto Ayrosa

Dr. Odair Dias Gonçalves,
Dr. Angelo Fernando Padilha
Presidente de la Comisión Nacional
de Energía Nuclear
Alterno: Dra. Maria Cristina Lourenço

Por la República Argentina

Ministro Gustavo Eduardo Ainchil
Director General de Seguridad Internacional,
Asuntos Nucleares y Espaciales del
Ministerio de Relaciones Exteriores, Comercio
Internacional y Culto
Alternos: Secretario Lorena Capra,
Secretario Dana Borojovich, Ministro Alberto Dojas

Dr. Francisco Spano
Presidente de la Autoridad Regulatoria Nuclear
Alternos: Lic. Gabriel Terigi, Lic. Elena Maceiras

Members of the Commission

On behalf of the Federative Republic of Brazil

Ambassador Carlos Sérgio Sobral Duarte,
Minister Glivânia Maria de Oliveira
Director of the Department of International
Organizations of the Ministry of Foreign Affairs
Alternate: Ministro Ricardo Maschietto Ayrosa

Dr. Odair Dias Gonçalves,
Dr. Angelo Fernando Padilha
President of the Brazilian Commission
of Nuclear Energy
Alternate: Dra. Maria Cristina Lourenço

On behalf of the Republic of Argentina

Minister Eduardo Ainchil
General Director of the International Security,
Nuclear and Space Affairs of the Ministry of
Foreign Affairs, International Trade and Worship
Alternates: Secretary Lorena Capra,
Secretary Dana Borojovich, Minister Alberto Dojas

Dr. Francisco Spano
President of the Nuclear Regulatory Authority
Alternates: Lic. Gabriel Terigi, Lic. Elena Maceiras

English

ANNUAL REPORT 2011

26

Message from the Secretary

28

Twentieth Anniversary of ABACC

35

Activities of the Commission

36

Application of Safeguards

39

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

41

Participation of ABACC in National and International Events

42

Strengthening Technical Development

43

Technical Cooperation

44

Institutional Activities

45

Administration and Financial Activities

47

Outlook for 2012

78

Inspectors

80

Facilities under the Quadripartite Agreement

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 USES 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 2011 ANNUAL REPORT.

Over the years, the ABACC secretariat has sought a report format that fulfills the best criteria of transparency and objectivity which should characterize this type of publication. In recent years, we have opted for a chapter format to reflect more the functionality rather than the institutional structure of ABACC. It appears to us that this presentation facilitates the reading and the understanding of the institution's operational dynamic. For these reasons, in this Report, we are maintaining the same format as in the previous reports, with a small addition; small in the number of pages but enormous in significance. The chapter, added immediately after the Message from the Secretary, provides information about the main activities performed over the year in commemoration of the twenty years of ABACC. It also provides a collection of declarations from national and international authorities in celebration of the institution's anniversary. This insertion celebrates a safeguards system created

by Argentina and Brazil that is nowadays unique in the world and which, consolidated and matured over these twenty years, has become respected by the international community. With this insertion, we intend to provide a homage of recognition and thanks to all those who in some way have contributed to this success. These people collaborated by occupying the most diverse positions in the institution: there were the Secretaries, Commission members, clerical staff, officers from different sectors and inspectors. Actually, many of them never held any position in the institution, but they were fundamental in preparing the political and technical arrangements that allowed for the creation of ABACC.

In compliance with its mission – the central objective of which is the application of safeguards in the nuclear facilities and for all the nuclear material of Brazil and Argentina - ABACC performed 110 inspections during 2011, of which 65 were in Argentine facilities and 45 in Brazilian facilities.

As a result of this work, the ABACC once again has the satisfaction of being able to guarantee to the Argentine and Brazilian societies and to the international community that, in 2011, all the nuclear material and other safeguards elements, both in Brazil and in Argentina, were used for exclusively peaceful purposes and were appropriately accounted for. In concluding its work during this period, ABACC did not find any indication of a breach of the commitments assumed by both countries.

The Secretariat is certain that these results were only possible due to the dedication and professionalism of its officers, support staff and

inspection team, to whom I want to dedicate a special thank you.

During 2011, there were modifications in the composition of the ABACC governing body: the ABACC Commission. The Secretary Dana Borojovich and the Minister Alberto Dojas were appointed alternate members in the Argentine representation. In the Brazilian representation, the two members, Dr. Odair Gonçalves and the Ambassador Carlos Duarte, were replaced by Dr. Angelo Fernando Padilha and the Minister Glivânia Maria de Oliveira, respectively. The Secretariat welcomes the new members, in the certainty that they will contribute significantly to the excellent performance of ABACC. At the same time, the Secretariat offers a special vote of thanks to Dr. Odair Gonçalves and to the Ambassador Carlos Duarte, who carried out their roles with a special dedication and professionalism, making important contributions to ABACC. They deserve our recognition and our utmost thanks. The Secretariat, the staff and the inspectors of ABACC wish both of them best wishes in the performance of their new duties.

The Secretariat also wishes to record its recognition and thanks to all the Commission members, whose actions and guidance have significantly facilitated the excellent performance and progress of the work carried out.

The permanent endeavour for improvement in its staff and the concern to always keep up-to-date with the state of the art in the technology and innovations of the application of safeguards, have resulted in the international recognition of ABACC as an example of bi-national effort of construction of mutual trust and of transparency

in the use of nuclear energy for exclusively peaceful purposes.

In order to provide continuity to an institutional policy of maintenance of the quality and of the search for excellence in its staff, several training and qualification courses took place in 2011.

Also during 2011, ABACC participated in several international forums, presenting both technical and institutional lectures. Highlights were the participation in the 55th General Conference of the IAEA and, as a guest speaker, at the Forum on Experience of Possible Relevance to the Creation of a Nuclear Weapon Free Zone in the Middle East, in November 2011, at the IAEA headquarters in Vienna. 2011 also recorded the first participation of ABACC, as an Observer, at the meeting of the Board of Governors of the International Atomic Energy Agency.

The Secretariat hopes that the reading of this report allows a clear understanding of the Agency's activities during 2011 and that it demonstrates that ABACC is complying efficiently and effectively with its mission.



Odilon Marcuzzo do Canto
SECRETARY

Twentieth Anniversary of ABACC

2011 WAS A VERY SPECIAL YEAR FOR ABACC. THE INSTITUTION COMPLETED 20 YEARS OF SUCCESSFUL OPERATIONS, WINNING CREDIBILITY AND ACQUIRING THE NECESSARY EXPERIENCE FOR AN INTERNATIONAL AGENCY IN THE APPLICATION OF NUCLEAR SAFEGUARDS.

The signing, on 18 July 1991, of the Bilateral Agreement for the Exclusively Peaceful Use of Nuclear Energy, signed by Argentina and Brazil, created the Common System for Accounting and Control of Nuclear Materials, the SCCC, and a bi-national agency to manage this system, the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials - ABACC. The Agreement definitively and clearly sealed the commitment of the countries with the exclusively peaceful use of all the nuclear materials and installations submitted to the jurisdiction or to the control of both countries. The ABACC system today represents a reference of the long process of economic, political, technological and cultural integration of the two countries.

The Quadripartite Agreement signed in December of the same year between the two countries, ABACC and the IAEA, completed the legal framework for the application of the appropriate safeguards system.

The creation of a "Common System" guaranteed the establishment of uniform safeguard procedures to be applied in Argentina and

in Brazil. Accordingly, all the safeguards requirements and procedures also became applicable to the nuclear materials and to the nuclear facilities of both countries.

Argentina and Brazil were capable of establishing a safeguards system that is nowadays unique in the world and which, consolidated and matured over these twenty years, has become respected by the international community.

In fact, it can be confirmed that this system has unique characteristics in comparison with other general safeguards agreements. The Quadripartite Agreement goes beyond a usual safeguards regime, which establishes the commitment between the state-party with the International Atomic Energy Agency. It includes two neighboring state-parties, an agency created by these States - ABACC- and the IAEA. Therefore, it represents a much more complete safeguards regime, which puts into practice the concept of "neighbors watching neighbors", which is internationally recognized as efficient and effective.

During these twenty years, ABACC has operated with institutional policies designed for the continued technical training of its human resources. The application of these policies and the use of "state-of-the-art" equipment are relevant factors for the success of ABACC and for the independence of its conclusions.

Similarly, the mature relationship with the IAEA, constructed over time, allows for both agencies to work in harmony and with great objectivity.

The cooperation arrangements between the two agencies for the application of safeguards were developed and placed into effective use, respecting the basic principles of the Quadripartite Agreement: the joint performance of the inspections, the coordination of the activities in order to avoid the duplication of human resources and materials, and the independence of the conclusions obtained.

Based on these principles, countless mechanisms were developed for the joint procedures, in the use of equipment, personnel and in the analysis of the application of the safeguards, which allow for a significant optimization of resources.

The strong integration of ABACC with the other international participants involved in the application of safeguards regimes provided the exchange of experience and enriched knowledge for all. ABACC has benefited from technical cooperation with the IAEA, with EURATOM, with the United States Department of Energy, nuclear institutions from the European Community and with the national authorities of Argentina and of Brazil. The relationship with other international partners, notably Canada in the development of training courses, South Korea, France, Japan and the United Kingdom, in the conceptual development of the application of safeguards, has been significant. The participation in international forums, such as the meetings of ESARDA and of INMM, has provided the exchange of extremely productive ideas and experiences for the strengthening of ABACC.

A determinant factor in this success is the continued support and recognition that the governments of Brazil and of Argentina have given ABACC. This has been demonstrated in a historical series of joint declarations from recent governments. This support and recognition have been tangible in the backing of the two chancelleries and of the Commission members in assuring the excellent performance of ABACC, guaranteeing the necessary budgetary resources for its operation and preserving its institutional independence. These are essential actions that allow ABACC to perform its mission and to achieve the objectives for which it was created.

The ABACC personnel, both staff and inspectors, is a clear demonstration of this support: they all are from institutions of the nuclear area of the two countries. Also, the technical cooperation of ABACC with the laboratories of the different agencies and institutions of Brazil and Argentine always has the complete support of the two governments.

In celebrating the 20 years of a successful institution such as ABACC, it is important to recognize and thank all the people who in some way have contributed to this success.

Commemorative Activities during the 20th Anniversary



At the 33rd ESARDA Annual Meeting

BUDAPEST, HUNGARY

Held in May, the first commemoration of the ABACC anniversary took place at this meeting. The Secretary presented in his speech the achievements over these 20 years and the technical cooperation existing between the European Safeguards Research and Development Association - ESARDA and ABACC. In his opening speech, Dr. Kristóf Horváth, president of ESARDA, highlighted the competence and the expertise of ABACC in administering and applying the SCCC to all the materials in all the nuclear activities in Brazil and in Argentina, with all the challenges arising from the several technologies in the region.



Ministerial Event

BUENOS AIRES, ARGENTINA

Held on July 8th, the opening ceremony was chaired by the Minister of Foreign Affairs, International Trade and Culture of Argentina, Héctor Timerman, the Minister of Foreign Affairs of Brazil, Antonio de Aguiar Patriota, the Minister of Federal Planning, Public Investment and Services of Argentina, Julio de Vido, the Director General of the International Atomic Energy Agency, Yukiya Amano, and the Secretary of ABACC, Odilon Marcuzzo do Canto. Present at the event were also the ABACC Deputy Secretary, Antonio Abel Oliveira, ABACC Commission members, the Ambassador of OPANAL, Gioconda Ubeda, senior authorities of institutions from the nuclear area, members of the diplomatic corps and inspectors and officers from ABACC.

The chancellors of the two countries published a joint article in Brazil and in Argentina entitled "Brazil and Argentina and Nuclear Cooperation". It highlighted the political importance of the creation of ABACC and the significance of the Argentine-Brazilian experience in the promotion of the transparency and the mutual trust in the nuclear field. Mr. Amano published the article "Celebrating the nuclear cooperation", which mentioned the joint work of ABACC and of the IAEA in the verification of the peaceful use of nuclear materials in Brazil and in Argentina.



At the 52nd INMM Annual Meeting

PALM DESERT, UNITED STATES

This meeting has been, along the years an expressive participation of the nuclear community, therefore ABACC organized a reception for the participants of the International Safeguards Technical Division on the 17th of July, first day of the event. ABACC received a special award; the "Special Service Award ABACC 2011" delivered during the social event of the meeting which provided significant publicity about the commemoration. The award stated the following: "The Institute of Nuclear Materials Management recognizes ABACC with a Special Service Award at the 52nd Annual Meeting for its 20 years of leadership in regional nonproliferation and safeguard training".



55th General Conference of the IAEA

VIENNA, AUSTRIA

ABACC participated in the conference with a booth located at a highly visible place to everybody attending the event. It was inaugurated by Yukiya Amano, IAEA Director General. In his speech, Mr. Amano praised the profitable collaboration existing between ABACC and the IAEA and the positive results obtained over the years. Authorities from Brazil and from Argentina, officers from the IAEA, the secretaries and officers from ABACC were present at the inauguration. During the event, the Division of Public Information of the IAEA published a press release on its website with the title "Latin America's Bilateral Safeguards Celebrated".



International Seminar "20 YEARS OF ABACC"

RIO DE JANEIRO, BRAZIL

On the 10th and 11th November, at the Itamaraty Palace, Rio de Janeiro, the secretariat of ABACC held an international seminar on the operation of ABACC and its interaction with national and international organizations in the application of safeguards.

The Seminar program included four round tables. Authorities and representatives from institutions of the nuclear area, of science and technology, universities and from the governments of Argentina and of Brazil were present. Representatives from several international institutions with which ABACC has a continued relationship participated in the round tables, including: the IAEA, OPANAL, the Department of Energy of the USA, national authorities from Canada, Korea, Japan and research laboratories from the United States.

For the event, the Ambassador Sérgio Duarte, the United Nations High Representative for Disarmament Affairs, sent a message congratulating ABACC for its 20 years and highlighting the model of cooperation, transparency and bilateral governance.

The following topics were presented in the round tables:

- "ABACC and the interaction with its partners", with the participation of representatives from CNEN, from ARN, from the US Department of Energy and the Secretary of ABACC.
- "The international safeguards and the role of SSAC and RSAC", with the participation of representatives from the IAEA, from the Nuclear Material Control Center of Japan, from the Canadian Nuclear Safety Center and from the Korea Institute for Nuclear Nonproliferation and Control.
- "Regional Safeguards Systems as a Support to the Existing and Future Nuclear Weapon Free Zones" with the participation of the Secretariat of OPANAL and representatives from the Los Alamos National Laboratory, from the Japan Atomic Energy Agency and from the representative of the Universidade Estadual Julio de Mesquita Filho – UNESP.
- "The future of ABACC – Conditions and perspectives", with the participation of representatives from the Commission and the Secretariat of ABACC.

The presentations from the round tables are available at www.abacc.org.br

Extract from the declarations in commemoration of the 20 years of ABACC

FROM THE PRESIDENT OF THE ARGENTINE REPUBLIC, CRISTINA FERNÁNDEZ DE KIRCHNER, AND FROM THE PRESIDENT OF THE FEDERATIVE REPUBLIC OF BRAZIL, DILMA ROUSSEF, IN A JOINT COMMUNICATION MADE DURING THE OFFICIAL VISIT TO THE FEDERATIVE REPUBLIC OF BRAZIL

July 2011

In reaffirming the strategic character of the dialogue, the coordination and the consolidated trust in the bilateral nuclear field, they celebrated the twentieth anniversary of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC). This unequivocally demonstrates the commitment of both the countries with the exclusively peaceful uses of nuclear energy.

THE MINISTER OF FOREIGN AFFAIRS OF BRAZIL, ANTONIO DE AGUIAR PATRIOTA AND THE MINISTER OF FOREIGN AFFAIRS, TRADE AND CULTURE OF ARGENTINA, HÉCTOR MARCOS TIMERMAN

July 2011

To celebrate the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials is to celebrate an Argentina and a Brazil that look to the world from their strategic relationship. It is to celebrate our regional vocation for peace.

FROM THE SECRETARY-GENERAL OF THE UNITED NATIONS, BAN KI-MOON

July 2011

On the twentieth anniversary of the establishment of the Brazilian–Argentine Agency for Accounting and Control of Nuclear Materials, the Secretary-General congratulates both Governments on this significant milestone.

ABACC has made a very substantial contribution to regional nuclear disarmament and non-proliferation by providing for a sound regional framework for the application of IAEA safeguards and facilitated the entry into force of the Treaty of Tlatelolco, the nuclear-weapon-free zone encompassing of the entire Latin America and the Caribbean region.

**FROM THE DIRECTOR GENERAL OF THE INTERNATIONAL ATOMIC ENERGY AGENCY,
YUKIYA AMANO**

September 2011

In this twentieth anniversary of ABACC, I extend my sincere congratulations to the people and governments of Argentina and of Brazil, for the vision that they had in creating their binational agency and for the decision to continue jointly in a peaceful and cooperative direction, in which they can always count on the support of the IAEA.

**FROM THE AMBASSADOR SÉRGIO DUARTE, THE UNITED NATIONS HIGH REPRESENTATIVE FOR
DISARMAMENT AFFAIRS**

November 2011

For 20 years, ABACC has been a model of cooperation, transparency, bilateral governance, verification and control. I wish ABACC many more years of progress and significant achievements.

FROM THE COMUNIDAD DE ESTADOS LATINOAMERICANOS Y CARIBEÑOS - CELAC

December 2011

The heads of State and Government of Latin America and of the Caribbean, in a meeting in Caracas, in the Bolivarian Republic of Venezuela, on 3 December 2011, at a Summit of the Latin-American and Caribbean States, expressed their satisfaction on the twentieth anniversary of the agreements whereby Argentina and Brazil declared their unequivocal commitment to the strictly peaceful use of nuclear energy and created the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC).

They are to be congratulated for the international recognition of the success of the experience of ABACC, which is an example and a source of inspiration to other regions in the world, especially those where Nuclear-Weapon-Free Zones do not exist.

Activities of the Commission

THE COMMISSION, THE HIGHEST HIERARCHICAL BODY OF ABACC, IS RESPONSIBLE FOR PROVIDING THE TECHNICAL AND POLICY GUIDELINES TO BE APPLIED BY THE AGENCY. IT IS COMPOSED OF FOUR MEMBERS, TWO OF WHOM ARE ARGENTINE AND TWO ARE BRAZILIAN.

This year, the principal members from Argentina were the Minister Gustavo Eduardo Ainchil and Dr. Francisco Spano; the principal members from Brazil were the Ambassador Carlos Sérgio Sobral Duarte, replaced by Minister Glivânia Maria de Oliveira and Dr. Odair Dias Gonçalves, replaced by Dr. Angelo Fernando Padilha.

In addition to the three ordinary meetings, held in April, August and December, two extraordinary meetings were also held in May and July.

At the first meeting, in April, the Secretariat distributed the estimate of the 2012 budget and the proposed program for the events in commemoration of the ABACC anniversary.

In the May and July extraordinary meetings, a check was made of the progress of the activities in commemoration of the 20 years of ABACC.

In the August meeting, the highlight was the approval of the Work Plan and Budget for 2012 and the presentation of the program of the event,

to be held in Rio de Janeiro in November, as part of the commemoration of the anniversary of ABACC.

In the December meeting, the proposal to update the team of the Argentine inspectors submitted was approved and the Secretariat made a presentation on the topic "State Level Approach in the Application of Safeguards", in response to the request made by the Commission members.

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: Lic. Antonio Abel Oliveira became the secretary of ABACC and Dr. Odilon Marcuzzo do Canto became the deputy secretary.

Application of Safeguards

IN COMPLIANCE WITH OUR MISSION TO APPLY THE NUCLEAR SAFEGUARDS EFFECTIVELY AND EFFICIENTLY IN ARGENTINA AND IN BRAZIL, THE SECRETARIAT OF ABACC PLANNED, CARRIED OUT, GAVE THE TECHNICAL SUPPORT AND EVALUATED THE INSPECTIONS PERFORMED IN 2011. THE DATABASES THAT SUPPORT THE SAFEGUARDS ACTIVITIES WERE UPDATED AND THE INSTRUMENTS AND EQUIPMENT USED IN THE INSPECTIONS WERE REGULARLY TESTED AND CALIBRATED.

Inspections performed

ABACC carried out routine and ad-hoc inspections in coordination with the International Atomic Energy Agency and the national authorities. During the year, 65 inspections were performed in Argentine facilities and 45 in Brazilian facilities, which demanded an effort of 474 inspectors-day in the field and a total availability of 998 inspectors-day for other activities.

All safeguard inspections planned for the year in Argentina and in Brazil were performed and they complied with the safeguards criteria of ABACC and the IAEA.

Main activities performed in Argentina

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

Short Notice Random Inspections and a Physical Inventory Verification inspection were carried out in this installation.

At the *Complejo Fabril Córdoba*

The domestic transfers of scraps performed during the year complied with the requirements established in the safeguards criteria of ABACC and IAEA.

At the *Central Nuclear Embalse*

Two spent fuel transfer campaigns from the storage pool to the silos were performed with a total duration of approximately eight months.

At the *Central Nuclear Atucha II*

ABACC and the IAEA finalized the project of the integrated counting system of the spent fuel elements that will monitor the flow of spent fuel between the reactor and the storage pool, and the optical surveillance system. The systems will be installed and tested in order to be operational when the power plant is commissioned.

Main activities performed in Brazil

At the *Fábrica de Combustível Nuclear – Reconversão e Pastilhas/ Componentes e Montagem of the Indústrias Nucleares do Brasil*

Short Notice Random Inspections and a Physical Inventory Verification inspection were performed. During these inspections, the corresponding Design Information Verification was also performed.

Planta Piloto para Enriquecimento de Urânio do Centro Tecnológico da Marinha em São Paulo and the Planta de Enriquecimento Comercial of the Indústrias Nucleares do Brasil

Unannounced inspections were performed at these two facilities in coordination with the IAEA.

At the *Central Nuclear Angra 1*

The Physical Inventory Verification inspection was performed during the shutdown for the maintenance of the power reactor.

Improvements in the application of safeguards

Modernization of the system for the recovering and recording of images of the surveillance system of the *Central Nuclear Embalse* and of the commercial enrichment plant of the *Fábrica de Combustível Nuclear of the Indústrias Nucleares do Brasil*. The new system is more reliable and efficient.

Manufacture of tertiary standards of natural uranium and tertiary standards of enriched uranium for the calibration of non-destructive analysis equipment. ABACC collaborated with Argentine and Brazilian institutions in the manufacture of these standards.

Implementation of the Unattended System for the verification of the spent fuel transfers at the *Central Nuclear Embalse*. The three subsystems that form this system were assembled and tested. However, further adjustments will be performed in the equipment and accessories for the complete test of the system.

Implementation in ABACC of a prototype of a surveillance system for tests of remote information transmission about the state of health of safeguards equipment. ABACC and the IAEA are preparing a proposal that complies with the requirements defined by the national authorities that takes the advantage of the IAEA's experience in the installation of these systems. The technique of remote information transmission will be applied in some of the surveillance systems in Argentina and in Brazil.

Completion of the Next Generation Surveillance System, whose technical features provide the guarantee that the electronic circuit boards of the camera cannot be altered, as well as having an authentication system with higher security levels compared to the surveillance systems in operation.

Definition of the steps needed to follow-up the approval of the ABACC-Cristallini Method with the IAEA and its certification with the American Society for Testing and Materials. This method has lower costs and produces less quantity of liquid wastes.

Improvement of the ABACC Accounting Database to accept the accounting data from the Argentine and Brazilian facilities generated by the "e-Gamma" program, developed by the *Comissão Nacional de Energia Nuclear* of Brazil, and by the "ICAIFE" program, developed by the *Autoridad Regulatoria Nuclear*.

Development of the project to improve the Operations Database, which will be accessed via WEB by the inspectors in the field.

Avances in the application of safeguards

In the verification of the nuclear material in conversion plants

Work groups from Argentina and from Brazil are working to present proposals with safeguards measures that improve the verification of the nuclear material and the implementation of Short Notice Random Inspections in the conversion plants of natural uranium of both countries.

The groups are analyzing the starting point of declaration of the nuclear material, the verification methods of this material, the instruments that can be used in this verification and the methodology to be employed.

In these proposals, ABACC and the IAEA intend to make maximum use of the equipment used by the operators in the productive process and to provide steps that guarantee the authenticity of the obtained data.

In the application of safeguards in uranium enrichment facilities

The system of verification by images of the cascades in the enrichment plant of the *Fábrica de Combustível Nuclear* of the *Indústrias Nucleares do Brasil* was improved in order to obtain greater efficiency in these verifications.

ABACC is developing a software that manages the system of monitoring and recording of the weight of the cylinders that uses the data from the operator's weighing system.

The operator and CNEN approved that swipe samples be taken from the *Laboratório de Desenvolvimento de Elementos de Separação Isotópica* for environmental analysis in specific places and a partial and controlled visual access that confirm the activities declared by the operator.

ABACC, the IAEA and ARN discussed the proposal of the safeguards approach being applied in the *Mock Up Laboratory* of the *Planta Piloto de Enriquecimiento de Uranio* in Pilcaniyeu. Aspects regarding the operational regime of the plant as well as the technical data of the process that is being implemented by the operator were incorporated into the safeguards approach.

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

Meetings between ABACC and the national authorities

In the meetings held with the *Autoridad Regulatoria Nuclear*, the topics discussed were the implementation of safeguards in Argentine facilities in general, the update of the implementation timetable of systems and equipment in the power plants and a revision of the inspection procedures, in particular the Short Notice Random Inspections for the fuel fabrication plant and the procedures adopted for the request of exemption or termination of safeguards of nuclear materials. An evaluation of the inspection effort was also made, mainly with respect to the scrap campaigns.

In the meetings held with the *Comissão Nacional de Energia Nuclear* of Brazil, the discussions were about the activities to be performed in the Physical Inventory Verification inspection at the *Fábrica de Combustível Nuclear-Enriquecimento* and of the activities for the application of the safeguards approach in the enrichment plant of the *Indústrias Nucleares do Brasil*. The application of the safeguards approach in the *Planta de Conversão de UF₆* at the *Centro Experimental Aramar* during the commissioning period and the updating of the inspection procedures, in particular the Short Notice Random Inspections for the fuel fabrication plant, were also topics of the meetings.

Meetings between ABACC and the IAEA

The proposal of ABACC-IAEA cooperation for the **strengthening** of the regional system of safeguards was one of the highlights of the meetings.

In the cooperation with the IAEA, emphasis would be given to the **use** of the results of the analysis of the destructive tests performed, of the auditing accounting reports and of the data of the preliminary analysis of the Design Information Questionnaires.

Meetings between ABACC, the national authorities and the IAEA

The Parties of the Quadripartite Agreement met to monitor and revise the Design Information Questionnaires and the Facility Attachments. These documents establish the procedures used by the inspectors during the inspections.

ABACC kept Brazil and Argentina informed on the most important topics of the agenda of the Sub-Committee meeting of the Quadripartite Agreement such as the locations in the facilities where the inspectors can have access during the Design Information Verification inspections and the removal of environmental sampling during the Design Information Questionnaire activities.

Situation of the Design Information Questionnaires and the Application Manuals

From the information obtained during the inspections or supplied by the operators of the facilities, ABACC and the IAEA revised the Design Information Questionnaires and the Facility Attachments, which are the working documents of the inspectors during the inspections.

During 2011, 4 Design Information Questionnaires and 4 Facility Attachments from Brazilian facilities and 12 Design Information Questionnaires and 3 Facility Attachments from Argentine facilities were under revision.

It is important to highlight that the Argentine facility "*Depósito de Uranio Enriquecido*" was included in the list of facilities under safeguards.

The *Autoridad Regulatoria Nuclear* sent to ABACC and the IAEA the first version of the Design Information Questionnaire for the "*Proyecto Reactor Prototipo CAREM 25*" and an advanced notice with respect to the decision of DIOXITEK to build the "*Planta de Producción de Polvo de Uranio*". From the *Comissão Nacional de Energia Nuclear* of Brazil, ABACC and the IAEA received the information on the publication of an announcement for the construction project for the "*Reator Multipropósito Brasileiro*".

Participation of ABACC in National and International Events

ABACC IS INVITED TO PRESENT INSTITUTIONAL AND TECHNICAL LECTURES IN EVENTS. IN THESE OPPORTUNITIES, ABACC HAS THE OPPORTUNITY TO PROMOTE THE ACTIVITIES CARRIED OUT AND THE TECHNOLOGICAL DEVELOPMENTS ACHIEVED.

In Brasil

Thermal Energy Latin America

DATA: 2 FEBRUARY

PLACE: RIO DE JANEIRO, BRAZIL

LX Enhancement Course for Diplomats

DATA: 4 MAY

PLACE: BRASÍLIA, BRAZIL

International Nuclear Atlantic Conference - INAC

DATA: 18 -20 OCTOBER

PLACE: BELO HORIZONTE, BRAZIL

Abroad

Board of Governors of the IAEA

DATA: 7 -11 MARCH

PLACE: VIENNA, AUSTRIA

First participation of ABACC as an observer at the IAEA Board of Governors Meeting. The presence of ABACC in this meeting completed the negotiations of the Argentine and Brazilian governments and the ABACC to achieve the permanent status of observer.

OAS Seminar on Disarmament and Non-proliferation

DATA: 28-30 MARCH

PLACE: NEW YORK, UNITED STATES

ESARDA 33rd Annual Meeting

DATA: 16-20 MAY

PLACE: BUDAPEST, HUNGARY

Presentation of the paper "Twenty years of ABACC: accomplishments, lessons learnt and future perspectives", selected for publication in the "ESARDA Bulletin".

INMM 52nd Annual Meeting

DATA: 17-21 JULY

PLACE: PALM DESERT, UNITED STATES

Presentation of the papers: "Remote Monitoring in Safeguards: Security of Information and Enhanced Cooperation", prepared with representatives from the *Autoridad Regulatoria Nuclear* and from the International Atomic Energy Agency ; "In-Situ Verification of Spent Fuel at the Atucha-I Nuclear Power Plant", prepared with technicians from the Lawrence Livermore National Laboratory and "Twenty years of ABACC: contributions for the States to fulfill their safeguards obligations and accomplishments in establishing a safeguards system".

55th General Conference of the IAEA

DATA: 23-26 SEPTEMBER

PLACE: VIENNA, AUSTRIA

INMM/Esarda Workshop

DATA: 16-20 OCTOBER

PLACE: AIX-EN-PROVENCE

Presentation of the paper "Prospects for Regional Safeguards Systems", which discussed the participation of regional systems in the "safeguards approach in the state-level concept".

Forum on experience of Possible Relevance to the Creation of a Nuclear Weapon Free Zone in the Middle East

DATA: 21-22 NOVIEMBRE

PLACE: VIENNA, AUSTRIA

Strengthening Technical Development

THE TECHNICAL STRENGTH OF OFFICERS AND INSPECTORS PLAY AN IMPORTANT ROLE IN THE ACTIVITIES DEVELOPED BY ABACC. THE TRAININGS OFFERED DURING 2011 WERE:

For Brazilian inspectors

Joint ABACC-IAEA Auditing of Accounting Records (SJAR)

Seven Brazilian inspectors were trained in this course.

CANDU Technical Workshop: VXi Integrated Fuel Monitor and Integrated Safeguards System for Unattended Monitoring of Spent Fuel Transfers

Thirteen Brazilian inspectors participated in this training course.

For Argentine inspectors

Joint ABACC-IAEA Auditing of Accounting Records (SJAR)

Nineteen Argentine inspectors were trained in this course.

Technical Cooperation

THE TECHNICAL COOPERATION BETWEEN ABACC AND INSTITUTIONS FROM THE NUCLEAR AREA BRINGS RELEVANT RESULTS IN THE SAFEGUARDS APPLICATION. THE PROJECTS CARRIED OUT DURING THIS YEAR WERE:

With the US Department of Energy

ACTION SHEET

15

Development of Environmental Sampling Capability in Support of the Regional Agreement between Argentina and Brazil

OBJECTIVE

Training and qualification of Argentine specialists from the laboratories of the Support Network to ABACC in the analysis techniques of environmental sampling for safeguards.

ACTION SHEET

20

Investigation of Combined Measurements with Three-Dimensional Design Information Verification System and Gamma-Ray Imaging System for International Safeguards Applications

OBJECTIVE

Combine 3D Laser measurements and gamma spectrometry to detect the presence of nuclear materials in pipes and accessories of the nuclear facilities through three-dimensional images and gamma radiation profiles.

ACTION SHEET

21

Laboratory Quality Assurance Through Analytical Standards and Sample Exchange Programs

OBJECTIVE

Maintenance of the quality of the laboratories of the Support Network to ABACC through the analysis of analytical standards for the intercomparison of results.

ACTION SHEET

22

Cooperation on Developing a Spent Fuel Gross Defect Detection System at ATUCHA-I

OBJECTIVE

Develop software for the verification of spent fuel in the fuel storage pools of Atucha I.

With the Joint Research Center of the European Community

ACTION SHEET

24

Developing a System for ABACC to Function as a Regional Center for Education and Training on Safeguards

OBJECTIVE

Examine the general requirements of ABACC to become a training center for safeguards inspectors. The project will allow for the regional cooperation in the areas of education and training for specialists in safeguards and ABACC will be able to train inspectors from the national authorities.

PROJECT: DEVELOPMENT AND USE OF THE 3D LFR LASER SYSTEM

OBJECTIVE

Develop a 3D LFR laser system that can verify physical alterations in pipes and equipment in nuclear facilities.

ACTION SHEET

25

Secure Remote Access for ABACC

OBJECTIVE

Develop and install tools to assure greater protection and confidence in the communications between ABACC inspectors in the field, using laptops, and the computers in the ABACC headquarters and in the office in Buenos Aires.

Institutional Activities

THE INSTITUTIONAL ACTIVITIES WERE INTENSIFIED BY THE EVENTS HELD IN COMMEMORATION OF THE 20 YEARS OF ABACC. TO COLLABORATE WITH ABACC IN THE ORGANIZATION OF THESE EVENTS, AN AD HOC GROUP WAS CREATED, WHICH WAS COMPOSED OF REPRESENTATIVES FROM THE *AUTORIDAD REGULATORIA NUCLEAR*, FROM THE *COMISSÃO NACIONAL DE ENERGIA NUCLEAR* OF BRAZIL AND FROM ABACC, TO SUPPORT THE SECRETARIAT IN THE ORGANIZATION OF THESE

In the most important events held in the nuclear field, such as the meeting of the European Safeguards Research and Development Association - ESARDA, the International Nuclear Atlantic Conference - INAC, organized by the Associação Brasileira de Energia Nuclear and the conference of the Institute for Nuclear Material Management, ABACC prepared a special ceremony. In this last event, ABACC was honored with the "Special Service Award". At the General Conference of the International Atomic Energy Agency - IAEA, ABACC had a very special participation, with a booth inaugurated by the Director General of the IAEA.

In this year of commemorations, the Latin American Section of the American Nuclear Society

also honored ABACC, conferring the award of "Institutional Personality of 2011" for its significant role in support of the peaceful use of nuclear energy in Latin America, over the last 20 years.

During the year, there was a series of visits to ABACC, which confirmed the interest of the international community in the institution. Among these visits, we highlighted the visit of a group from the Royal Society, interested in learning about the work developed by ABACC for a project to define the best practices in the nuclear area; from the Counter-Proliferation Department of the Foreign & Commonwealth Office of the United Kingdom; a delegation from the United States Department of Energy, headed by the sub-secretary, Daniel Poneman; the Ambassador Glyn Davies, the permanent representative of the United States in the IAEA, and Ms. Togzhan Kassenova, from the Nuclear Policy Program of the Carnegie Endowment for International Peace.

At the invitation of the Director General of the International Atomic Energy Agency, the ABACC secretary participated in the IAEA Ministerial Conference on Nuclear Safety, which was held in Vienna, on 20-24 June 2011.

Administration and Financial Activities

THE ECONOMIC-FINANCIAL BALANCE SHEET FOR 2011, A YEAR IN WHICH THE AGENCY COMMEMORATED AND CELEBRATED ITS TWENTIETH ANNIVERSARY, PROVIDED SATISFACTORY RESULTS. IT CONTINUED TO DEMONSTRATE THE STABLE ECONOMIC-FINANCIAL SITUATION OF THE INSTITUTION, WHICH FORTUNATELY HAS BEEN THE CASE SINCE ITS

The main determinants which contributed significantly to the compliance with the institutional operations, were the negotiations of the Commission to provide ABACC with the required economic and human resources and the administration of these resources by the Secretariat.

All the administration and financial activities, which continued under the supervision of the secretaries and were presented to the Commission every four months, were approved by the external auditors who examined the accounting records, the financial operations, the asset reports and the internal controls of the Agency.

The 2011 budget, approved by the Commission, was almost totally implemented. The costs exceeded the budgetary forecasts by approximately 8%, which was almost exclusively caused by the combination of inflation and the deterioration of the rate of the US Dollar to the Real.

Measures of austerity and optimization in the use of budgetary resources allowed for the expenses allocated to the commemorations of the twentieth anniversary of ABACC to be provided from the normal budget. This avoided the use of extraordinary resources, which the Commission had approved for this purpose at the beginning of the financial year.

Finally, it is important to highlight the undeniable "zero growth" of the institution in terms of personnel, goods and services since 1996. This has occurred despite the "apparent increase" of the budget. The objective of the increase of its nominal value, in dollars, has been to maintain its acquisitive power constant, when faced with exchange fluctuations and inflationary variables.

STATEMENT OF ACCOUNT FOR THE FINANCIAL YEAR

On December 31th 2011

REVENUES	4.386.100,00
Contribution of the Governments of Argentina and Brazil	4.386.100,00
EXPENDITURES	4.348.228,58
Budgetary Expenditures	4.141.419,88
Human Resources	2.464.542,33
Inspections	376.228,85
Technical Support	374.801,24
Planning & Evaluation	5.089,83
Coordination of the Safeguards Application and the Implementation of the Quatripartite Agreement and SCCC	100.264,06
Training	31.591,56
Computer Resources	30.369,69
Technical Cooperation	32.265,62
Institutional Relations	162.158,79
Operational and Infrastructure Expenditures	564.107,91
Balance of Financial Transactions	-28.169,77
Depreciation Over the Fiscal Year	234.978,47
SUPERAVIT OF THE FINANCIAL YEAR	37.871,42
INVESTMENTS	135.879,85
Acquisition of equipment and instruments	135.879,85
TOTAL ASSETS	3.504.083,12
Current Asset	2.866.409,79
Available	2.789.770,48
Credits and Advanced Payments	76.639,31
Fixed Assets & Untangible Assets	637.673,33
TOTAL LIABILITIES	3.504.083,12
Payments due	121.618,79
Net Capital	3.382.464,33
Superavit from Previous Financial Years	3.344.592,91
Superavit of 2011 Financial Year	37.871,42

(in US\$)

Outlook for 2012

AMONG THE HIGHLIGHTED ACTIVITIES THAT ABACC AIMS TO PERFORM IN 2012, THE FOLLOWING ARE EMPHASIZED:

- Finalization and tests of the unattended system for spent fuel transfers to the silos at the *Central Nuclear Embalse*;
- Installation and operation of the safeguards systems at the *Central Nuclear Atucha II* that have commissioning forecast for 2012;
- With respect to the safeguards in conversion plants in Argentina and in Brazil, ABACC expects to finalize the safeguards approach and to acquire the equipment required for the *Planta de Conversión a UO₂* of Córdoba and at the *Planta de Conversão de UF₆* in commissioning at the Centro Tecnológico da Marinha em São Paulo, in Aramar.

ABACC will continue the implementation of the safeguards approach at the *Usina de Enriquecimento de Urânio* of the *Indústrias Nucleares do Brasil* and of the *Planta Piloto de Enriquecimiento de Uranio* in Pilcaniyeu. This

activity will require investment in equipment and an increase in the inspection effort when the new cascades begin to operate.

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.

A challenge in 2012 is the definition and coordination with the IAEA of the methodology of the application of safeguards using the "State-level concept".

Some updating projects of surveillance systems with special authentication requirements, using new technology, have also showed up as topics which ABACC should provide greater attention.

ABACC will continue its verification work for the exclusively peaceful use of nuclear energy in Argentina and Brazil, in accordance with the non-proliferation policy adopted by the two countries.

Inspetores da ABACC

Inspectores de la ABACC

ABACC Inspectors

Inspetores Brasileiros

Inspectores Brasileños

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

Inspetores Consultores

Inspectores Consultores

Senior Technical Inspectors

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

Inspetores Argentinos
Inspectores Argentinos
Argentine Inspectors

Aldo Ernesto Pérez
Analía Saavedra
Aníbal Damián Coppo
Beatriz Norma Gregori
Carlos Alberto Moreno
Carlos Alberto Rojas
Carlos Daniel Llacer
Carlos Darío Fernández
Carlos Eduardo Rodríguez
Christian Fabián Elechosa
Daniel Ángel Geraci
Daniel Héctor Giustina
Darío Osvaldo Colombo
Dora Norma Vidal
Enrique Cinat
Erwin Gaspar Galdoz
Flavio Alejandro Andrada Contardi
Gustavo Alfredo Bustos
Gustavo Daniel Díaz
Horacio Lee Gonzales
Hugo Edgardo Vicens
Hugo Luis Rey
Juan Ángel Cruzate
Juan Marcos Ferro
Laura Beatriz Castro
Leonardo Ariel Pardo
Leonardo Gustavo Barengi
Liliana Inés De Lio
Luis Alberto Giordano
Luis Alfredo Rovere
Marcelo Rojo

María Beatriz Olano
María Carolina Bianchi
María Teresa Alonso Jiménez
Mauricio Guillermo Bachoer
Néstor Daniel Mosquera
Néstor Hugo Fruttero
Norberto Ariel Novello
Norberto José Bruno
Osvaldo Alberto Calzetta Larrieu
Pablo Román Cristini
Patricia Susana Arrigoni
Rodolfo Sebastián Vigile
Sergio Adrián Menossi
Stella Maris Bonet Durán
Susana Beatriz Papadópolos
Thais Hernández Sánchez
Walter Adrián Truppa

Inspetores Consultores
Inspectores Consultores
Senior Technical Inspectors

Alfredo Lucio Biaggio
Aníbal Bonino
Antonio Abel Oliveira
Elena Maceiras
Elías Palacios
Sonia Fernández Moreno

Instalações Brasileiras sujeitas ao Acordo Quadripartite

Instalaciones Brasileñas sujetas al Acuerdo Cuatripartito

Brazilian facilities under the Quadripartite Agreement

NOME/NOMBRE/NAME
Arranjo Grafite-Urânio Subcrítico
Armazenagem ARAMAR <ul style="list-style-type: none"> 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 (Em construção) (En construcción) (Under construction)
Coordenadoria de Desenvolvimento e Tecnologia de Combustíveis (IPEN-CNEN/SP)
Fábrica de Combustível Nuclear - Enriquecimento <ul style="list-style-type: none"> MBA1 – Estocagem MBA2 – Processo
Fábrica de Combustível Nuclear - Reconversão e Pastilhas / Componentes e Montagem
Laboratório de Desenvolvimento de Elementos de Separação Isotópica <ul style="list-style-type: none"> 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

NOME/NOMBRE/NAME
Laboratório de Espectroscopia a Laser <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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

Instalações Argentinas sujeitas ao Acordo Quadripartite

Instalaciones Argentinas sujetas al Acuerdo Cuatripartito

Argentine facilities under the Quadripartite Agreement

NOME/NOMBRE/NAME
Bunker de Almacenamiento
Central Nuclear Atucha I
Central Nuclear Atucha II (Em construção) (En construcción) (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 Almacenamiento de Combustibles Irradiados de Reactores de Investigación
Facilidad Experimental de Conversión por Vía Seca
Laboratorio Alfa
Laboratorio Química Analítica en Medios Activos
Laboratorio de Física Nuclear
Laboratorios de la Gerencia de Química
Laboratorio de Nanoestructura

NOME/NOMBRE/NAME
Laboratorio de Química Analítica
Laboratorio de Recuperación 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
Planta de Conversión a Hexafluoruro de Uranio
Planta de Conversión a UO ₂
Planta Piloto de Enriquecimiento de Uranio <ul style="list-style-type: none"> • 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 Multipropósito Argentino
Tecnología Nuclear Innovativa



Av. Rio Branco, 123/Grupo 515
Centro - CEP: 20040-005 - Rio de Janeiro - Brasil
Tel.: +55 21 3171-1200
Fax: +55 21 3171-1248
www.abacc.org.br

Secretaria da ABACC

Secretário

Odilon Marcuzzo do Canto

Secretário adjunto

Antonio Abel Oliveira

Planejamento e Avaliação

Orpet Peixoto; Osvaldo Calzetta Larrieu

Contabilidade de Materiais Nucleares

Silvio Gonçalves de Almeida; Luis Alberto Giordano

Operações

Maria Clarisse Lobo Iskin; Carlos Rodríguez

Apoio Técnico

Geraldo Renha; Erwin Gaspar Galdoz

Administração e Finanças

Rubén Gerardo Novo

Relações Institucionais

Selma Chi Barreiro

Pessoal Administrativo – na sede

Luiz da Costa Gonçalves, Max Teixeira Facchinetti, Paulo César da Silva, Maria Dilma Marcolan Cosetti, Maria Isabel Reyes Gonzalez e Winarni

Colaboradores – no escritório de Buenos Aires

Leonor Onorati; Daniel Giustina

Secretaria de la ABACC

Secretario

Odilon Marcuzzo do Canto

Secretario adjunto

Antonio Abel Oliveira

Planificación y Evaluación

Orpet Peixoto; Osvaldo Calzetta Larrieu

Contabilidad de Materiales Nucleares

Silvio Gonçalves de Almeida; Luis Alberto Giordano

Operaciones

Maria Clarisse Lobo Iskin; Carlos Rodríguez

Apoio Técnico

Geraldo Renha; Erwin Gaspar Galdoz

Administración y Finanzas

Rubén Gerardo Novo

Relaciones Institucionales

Selma Chi Barreiro

Personal Administrativo – en la sede

Luiz da Costa Gonçalves, Max Teixeira Facchinetti, Paulo César da Silva, Maria Dilma Marcolan Cosetti, Maria Isabel Reyes Gonzalez e Winarni

Colaboradores – en la oficina de Buenos Aires

Leonor Onorati; Daniel Giustina

Secretariat of ABACC

Secretary

Odilon Marcuzzo do Canto

Deputy secretary

Antonio Abel Oliveira

Planning and Evaluation

Orpet Peixoto; Osvaldo Calzetta Larrieu

Accounting of Nuclear Materials

Silvio Gonçalves de Almeida; Luis Alberto Giordano

Operations

Maria Clarisse Lobo Iskin; Carlos Rodríguez

Technical Support

Geraldo Renha; Erwin Gaspar Galdoz

Administration and Finances

Rubén Gerardo Novo

Institutional Relations

Selma Chi Barreiro

Administrative Staff – in the headquarters

Luiz da Costa Gonçalves, Max Teixeira Facchinetti, Paulo César da Silva, Maria Dilma Marcolan Cosetti, Maria Isabel Reyes Gonzalez e Winarni

Collaborators – at the offices in Buenos Aires

Leonor Onorati; Daniel Giustina

Agência Brasileiro-Argentina de
Contabilidade e Controle de Materiais Nucleares

Agencia Brasileño-Argentina de
Contabilidad y Control de Materiales Nucleares

Brazilian-Argentine Agency for
Accounting and Control of Nuclear Materials



Av. Rio Branco, 123/Grupo 515 - Centro
CEP: 20040-005 - Rio de Janeiro - Brasil
Tel.: +55 21 3171-1200
Fax: +55 21 3171-1248
www.abacc.org.br