AUTORIDAD REGULATORIA NUCLEAR
Competent Authority of Argentina:
safe transport of radioactive material

Christian Elechosa, Jorge López Vietri

Gerencia Seguridad Radiológica, Física y Salvaguardias
• Objective of the presentation
• Legal framework
• Transport safety issues
• Future plans
• Conclusions
Describe the main aspects in the regulatory implementation of safety issues related to the transport of radioactive material by the Nuclear Regulatory Authority (ARN), which is the Competent Authority for regulating transport of such materials in Argentina.
ARN is empowered to regulate and control the nuclear activity with regards to:
Safety, Security and Nuclear Non-proliferation issues

National Standard

• ARN has adopted the IAEA Regulations for the safe transport of radioactive material since the 1st publication of 1961 Edition – S.S. No. 6

• At present: Revision 2 of ARN Standard AR 10.16.1 “Transport of radioactive material” is in force

⇒ 2009 Edition of TS-R-1
Transporte de Materiales Radiactivos

Normas de seguridad del OIEA
para la protección de las personas y el medio ambiente

Reglamento para el transporte seguro de materiales radiactivos
Edición de 2009

Requisitos de seguridad
Nº TS-R-1

IAEA
Organismo Internacional de Energía Atómica
Licensing and control tasks:

- ARN licensing tasks are according to Standard AR 10.16.1. In order to control and monitor the compliance with the applicable requirements of this Standard, this Authority performs inspections and regulatory audits to consignors, carriers, and other related users, and has acquired expertise in analysis, assessment and independent calculation.

- For over 30 years, Argentinean companies have been involved in the design of Special Form Radioactive Material (SFRAM) and Packages.

- Up to now ARN has issued 23 Certificates of Approval:
  - 10 SFRAM designs
  - 13 package designs
  - 2 package designs are in a licensing stage

First certificates: RA/0027/S - 1986; RA/0033/B(U)F - 1988
Licensing and control tasks:
TRANSPORT SAFETY ISSUES: PACKAGE DESIGNS

TYPE B(U)F PACKAGE - MODEL MG1 (Research Reactor Fuel Elements)

TYPE B(U) PACKAGE - MODEL CONTRAS (Recharge Co-60 sealed sources)
TRANSPORT SAFETY ISSUES: PACKAGE DESIGNS

TYPE B(U) PACKAGE - MODEL BU-MAN (Ir-192, Mo-99, I-131)

TYPE AF PACKAGE - MODEL DALMA 25 (U compound solutions U-235 ≤ 20%)
MAIN CO-60 SHIPMENTS FOR EXPORT
FUEL ELEMENT SHIPMENTS FOR EXPORT

Peru              Algeria              Egypt               Australia
≈ 1200 shipments/year:

- I-131
- Mo/Tc-99m
- Mo-99
- Ga-67
- F-18

- Brazil
- Bolivia
- Chile
- Costa Rica
- Ecuador
- Guatemala
- Panama
- Paraguay
- Peru
- Uruguay
- Venezuela
Quality Management System

• ARN has established a Quality Manual based on Standard ISO 9001:2008 and IAEA Recommendations PDRP-6 “Quality management of the Nuclear Regulatory Body”

• Process “Control of the transport of radioactive material”, TMR, obtained ISO 9001 Certification in 2008, given by IRAM and IQNet

Training provided & participation in IAEA activities

• Forty years experience providing domestic and regional training in safety for transport of RAM

• ARN in co-operation with IAEA: regional training courses developed in Buenos Aires in 1999, 2000 and 2008

• Argentina is member of TRANSSC and participates in IAEA Safety meetings

Data Bases

• IMPO/EXPO and SHIP
FUTURE PLANS

• ARN will continue working on the harmonization and integration of the related transport sections in order to maintain and improve a strong Safety Culture; it is intended to work in an efficiently and effectively way.

• The number of inspections will be increased; sharing information, database, historical records, risks and threats would promote the unified fulfillment of applicable requirements.

• Further training and awareness of all areas involved in transport should be strengthened. ARN will continue giving specific courses aimed to different audiences.

• In the framework of IAEA, ARN will continue working in order to solve the problems which interfere with the transport of RAM, and could result in delays or denials of shipments.

• Taking into account Argentine expertise on transport safety as well as its experience in the preparation and/or modification of IAEA related documents, ARN will share it with Latin America and The Caribbean countries by promoting regional events.
It is important:

• Participate in the elaboration/modification of IAEA Transport documents and promote, through TRANSSC, the activities dealing with the harmonization of translations into Spanish of IAEA, ICAO, IMO and IATA regulations

• Implement and improve the Argentine ARN standards as well as maintain them updated
  ⇒ *IAEA SSR-6 2012 Edition will enter into force on 2015*

• Assure the training of persons engaged in the Transport of radioactive material

• Perform inspections and regulatory audits to the different participants in Transport activities, in order to verify compliance with regulations

• According to the Quality Management System based on Standard ISO 9001, to keep the continuous improvement tasks
Thank you for your attention!
Autoridad Regulatoria Nuclear

Av. del Libertador 8250 (C1429BNP)
Ciudad Autónoma de Buenos Aires, ARGENTINA
Tel.: (+54) (011) 6323-1722 / 1708
Fax: (+54) (011) 6323-1771 / 1798

http://www.arn.gob.ar
E-mail: transporte@arn.gob.ar