

A model for minimizing denial of shipments in the America Region

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Abstract

Denials and delays of radioactive shipment have occurred and probably will always do. Reducing instances of denials to acceptable levels may be a tangible goal that consignors and consignees should envisage and pursue. The basis for solving denials and delays includes the participation of not only the nuclear national competent authorities but other authorities too. Shippers, consignors, carriers and consignees should include in their consultations the whole range of those authorities which apparently have no role to play but actually do. This paper describes the experience developed in Brazil and provides the basis of a Model which would be useful for other regions to adopt and adapt, to reduce the instances of denials and delays of radioactive shipment, by developing similar models appropriate to their conditions. The Model consists in the creation of a National Committee on denial of shipments with the participation of all stakeholders involved in the transport of dangerous goods.

Resumen

Los rechazos y retrasos de expediciones de material radiactivo ocurren y probablemente seguirán produciéndose. La reducción de las mismas a niveles aceptables puede ser una meta tangible que los remitentes y destinatarios pueden prever y conseguir. La base para resolver los casos de los rechazos y retrasos debe considerar no solo la participación de las autoridades nucleares competentes nacionales, sino también de otras autoridades gubernamentales. Los transportistas, remitentes, empresas de transporte y destinatarios deberían considerar en sus consultas a todo el amplio rango de autoridades que aparentemente no tendrían participación alguna, pero que en la actualidad la tienen. El presente trabajo describe la experiencia desarrollada en Brasil y provee la base de un Modelo que podría resultar ser útil a otros países y regiones si lo adoptan y adaptan, para reducir los casos de rechazos y retrasos de expediciones de material radiactivo, según sus propias condiciones y características. El Modelo consiste en la creación de un Comité Nacional sobre rechazos de expediciones de material radiactivo con la participación de todos los grupos de interés involucrados en el transporte de mercancías peligrosas.

1. Introduction

Radioactive material is used throughout the world for many applications that benefit humankind, encompassing agriculture, industry, medicine, electric power generation and research purposes. In almost all cases, the materials are generated in locations other than those where used.

The transportation of the radioactive material places it outside of controlled facilities, in the public domain, and often entails movement between countries. As the peaceful uses of radioactive material grew, the international community recognized early on that rigid and uniform standards were needed to ensure the safety of handlers, the public and the environment. Because of their short half-lives, denial and delay of transport of

radionuclides like fluorine-18 or Iodine-131 has a strong and negative impact on health care.

The issue of denial of shipments is not just for specialists but affects the lives of millions of people around the world. The majority of the radioactive material shipped every day is used in hospitals for non-invasive diagnostics and treatment of several illnesses. Any delay or denial of shipment may render the isotopes useless for their intended application. Delay and denial of shipments of radioactive material occur in all modes of transport. Then the transport of radioactive materials is vital to the use of such materials in medicine, general industry and in the nuclear fuel cycle.

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We can say that the growing problem of refusal by carriers, ports and handling facilities to transport radioactive material are generating both social and economic problems and not only needs to be addressed with a lot of attention but also requires a quick solution.

Considering the problem of denial and delay of shipments of radioactive material and in response to the General Conference resolution, the IAEA Director General created a senior level Steering Committee including representatives from IAEA Member States, International Governmental and nongovernmental organizations and industry.

A strategy and an action plan were developed to significantly reduce cases of denial of shipment and alleviate the hardships due to denial and delay by reaching out to the concerned organizations and increasing awareness about the uses of radioactive material in public health, industry and power production; harmonizing national and international regulations; ensuring coordination among regulators within a State to minimize duplicative, overlapping and sometimes contradictory requirements; providing training and other educational program for cargo handlers and public officials on safety of transport of radioactive material.

A strategy for how the International Steering Committee (ISC) is to operate has been determined and includes the principles: promote education; make a collective effort to share information and experience; report of denials and delay of shipments. The strategy embraces notification, investigation, facilitation or mediation and reporting cases of delays and denials. The ISC developed and adopted an action plan, which is based on six areas of work: awareness, training, communication, promotion, economic and harmonization [1].

2. Methodology

One successful action in the America region has been the implementation of the Brazilian Model of minimizing denials and delays (D&D). Brazil has more than 3500 licensed facilities handling radioactive material. About

150.000 shipments per year, mostly radiopharmaceuticals are carried by air/land. [2].

These numbers reflect the quantum of transport activities in the country. The transport of radioactive material used in the nuclear fuel cycle (ores, yellowcake, UF₆, fresh fuel) which are intended for peaceful purposes are significant in quantities and involve considerable revenue to the transporters. Transport of sources for therapy, remarkably Co-60 are relevant due to the social impact, namely, health care.

Over the last 10 years sustainability problems in transport of radioactive material have been documented and addressed on case-by-case basis. Records show that instances of denials and delays have occurred in all transport modes, but mostly in transport by air. Reasons for refusals refer mostly to lack of information and/or mainly associated to risk perception [3].

Up to 2003 the instances of denials were brought to the attention of the Competent Authority (CA) and recorded but were not used as basis for a systematic solution. Specific cases requiring actions from the national competent authority for transport safety were addressed as being due to communication inefficiency. Difficulties in transport continued to be reported. When D&D do not constitute a regulatory issue, the Competent Authority would not be of much help.

Due to actions developed by the IAEA, the engagement of the Brazilian industry in providing relevant reports on D&D and proactively working with the international community, the CA reviewed its position and decided to join the international efforts in minimizing the problem. The nomination of a National Focal Point allowed a series of actions to be started [4]. A national committee was established and a domestic action was outlined. The thrust of the approach adopted by Brazil was to take all stakeholders on board. A broad-based committee was formed by the national competent authority. The committee included modal transport agencies, port/airport authorities, service providers, shipping lines, airport administration, isotope producers,

nuclear fuel suppliers, carriers and other relevant stakeholders joined the committee. Apparently each member of this committee has his own interest in the transport of radioactive material and could not be expected to “surrender” their claims. At the same time the economic and social impact of the delay and denial of shipment had to be appreciated by all the members.

It was necessary for each member of the committee to be informed about the need for transporting radioactive material and the positives of such transport. With that knowledge it was easy to see the negatives of delay and denial. The next logical step was to examine the reasons for such denials. It was appreciated by the committee that with improved coordination among the members of the committee it would be possible to address the issue more effectively. For example, instances of delay or denial due to procedural requirements were sorted out by informing the concerned stake holders, e.g., the carrier, about such requirements which led to compliance thereby eliminating delays and denials due to non-compliance with procedural requirements. There were instances where the concerned agencies were brought together to facilitate transport of radioactive material without any agency compromising or surrendering its position.

3. Results and discussions

The success of the Brazilian Model stems from the fact that an objective and coordinated effort among all stake holders with proper communication based on correct information could drastically reduce instances of delay and denial to insignificant levels.

The simplicity of this approach recommends itself to easy adoption in different regions with the necessary adjustments to take into consideration the local situations. The efficacy of this approach is evident from the fact the number of delays and denials has reduced considerably in Brazil. The cooperation among the members of the committee has to be continued. It is an ongoing process which may have to be tweaked periodically to incorporate the changing situations [5].

It is evident from the above that a concerted

effort aimed at addressing the issue objectively without compromising the standards of safety or any regulatory requirements could well lead to a way out of the problem.

4. Conclusions

Some conclusions of the Brazilian Model may be drawn:

Denials and delays of shipment of radioactive material are no longer a single business issue or problem. It needs to be addressed in a holistic view/approach and by a wide range of authorities.

A national competent authority for transport safety may or not recognize the existence of difficulties in accepting class 7 cargos for transport. However, a national competent authority should be concerned if a shipment which is deemed to be in compliance with its regulations for the safe transport of radioactive material is denied on grounds of safety.

It is up to a national competent authority to decide as to whether or not to take part in actions aiming to eliminate or minimize denials problems. However, it may wish to help/advise other authorities in addressing D&D problems by using the attributes and expertise it has accumulated.

Other authorities may benefit from the variety of resources available to the CA.

By discussing D&D issues in their modal forum, other competent authorities may perform a relevant role on D&D issues as potential problems are identified and reported to International Steering Committee, International Atomic Energy Agency, National Focal Point and Regional Coordinator.

A competent authority taking part in actions aiming to minimize sustainability problems but wishing not to prolong its participation may define strategy and deadline to move out from the activity, but in this case it should prepare a replacement to it.

5. Acknowledgements

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6. Bibliography

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