Communication and Radioactive Material Transportation

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Communication for radioactive material transportation is not simple. Many people consider it a synonym for fear. It is also one of the only nuclear activities done in the public domain. Good communication is thus very important but, it also has limits. Communication must be totally in line with:

- regulations
- requirements
- laws
- general organisation of a shipment
- rules applied to transport any type of material, particular rules applied to the transport of a particular material
- how the type of transport is chosen,

In fact, good communication requires all the elements which demonstrate that radioactive material transportation is well managed.

We may disclose a lot of information, but we must also keep some of it confidential for very simple and logical reasons. First of all, we are not transporting apples, we are transporting radioactive material, it is a very sensitive activity. Disclosing schedules and routes of a shipment is thus not possible.

Two types of communication are pertinent to nuclear material transport:

- prepared in advance
- crisis intervention

Communication prepared in advance is the basis, we have time to analyse the facts, to prepare our communication concerning the material, the transport means and the cask used. Prepared communication builds our library which is essential for crisis communication.

Using actual examples, such as MOX shipment to Japan or radioactive material shipments from France to Russia this article will analyse which type of documents are prepared in terms of communication for a transport.

Introduction

What do we need to communicate about radioactive material transportation? First of all, a team and an organisation in which everybody knows where to find information and what to communicate are needed. This is easier said than done! The Logistics Business Unit (BU) is in charge of overseeing all AREVA transportation, as well as the transportation of nuclear material for other customers. Such sensitive shipments face issues:

- any type of radioactive materials, from mining concentrates to high activity waste
- more than one hundred different types of transport
- International and multi-modal shipments
- More than 1200 flows identified inside AREVA alone

Being ready to communicate about any type of transport is thus a tough job! The groundwork is very important, communication prepared in advanced is the foundation for rapid response readiness when a crisis occurs.

Let's analyse the tools used to communicate.

A team

A specialised team is necessary, the communication team has to be regularly informed about the novelties in transportation and casks, risk management, time schedules, etc. The communication team is part of the technical transportation team. The engineers in charge of the cask design and the shipment operators must to be aware that it is an important part of the job, it is not a spare part. We may proceed to our shipments only if everything is managed including communication. For the routine job a small team is enough, but it is enlarged during a crisis. People who take part of the communication team during a crisis are to be trained. The training is done during the crisis drills which are scheduled during the year. A communicator is not to know everything about radioactive material transportation, but he must know where to find the right information and how to deliver it in a comprehensible way. Communicators must often translate technical jargon into a language understandable by everybody!
During a crisis, the communication team derives is not only from BU: if the radioactive material transported comes from the back-end (for example used fuel, waste or MOX fuel), the communication team of the associated BU is involved in the crisis management. All the external communications are to be validated by AREVA, there is also a communications team within AREVA.

A document database

A good document database is an essential part of communication. It is made of different types of documents coming from the communication prepared in advance and from communication developed during a crisis.
In the database there are:

- web sites
- corporate brochures
- educational data sheets
- business activity leaflets
- expert publications
- slide shows
- Info Flash
- newsletters
- past documents coming from former crisis our crises drills
- posters
- technical reflex datasheets on materials and casks
- cask licensing documents, design drawings
- shipment documents
- organisational documents
- picture library
- question and answer cards

These documents must be stored in a hardware database with a good search engine, so that you can quickly find want you need on the day of crisis..

An organisation

Within AREVA, there is a multi-level organization:
- an on-site Communications Department for the industrial sites such as MELOX or the La Hague plant, or communication officers for the smaller entities
- a BU Communications Department in each AREVA BU
- a Business Group (BG) communications Department
- an AREVA Communications Department

When a crisis occurs, it may be at any time of the day or night, the 24-hour on-call officer has a list of people to be informed. The on-site Communications Department is thus very quickly notified by the on-call officer or by the crisis management. On week-ends or during the night there is also an on-call communication officer who is to spread the alarm to all the Communications people who will be involved in the crisis management. With this system, everybody is very quickly aware of the crisis and its progress.
When it is necessary (depending on the crisis gravity), an on-site crisis cell is launched. When referring to transport, on-site can mean anywhere! Thus, our crisis cell is launched in our main office in Saint-Quentin-en-Yvelines. 5 to 50 people may be involved in the crisis management.
For the communication, the Logistics BU acts as a support to AREVA Communications by preparing, updating and transmitting all targeted Communications means such as:

- press releases, position papers, data sheets, videos and photographs, internal communication, etc.
- Media monitoring

The crisis communication cell is composed of:

- A coordinator
- One or two Back Office Communications Manager(s)
- An expert
- Two liaison managers in the field
- Assistants

Each year, this organisation is tested during national an internal crisis drill. During the national crisis drills, which last a day, theparties involved are:

- Competent Authorities
- Local authorities (Préfecture)
- TN International crisis cell
- AREVA crisis cell

During an internal crisis drill, only AREVA entities are involved.

For each sensitive shipment, such as MOX shipments to Japan or vitrified waste shipment to Germany, proactive and reactive crisis organisations are implemented and specific documents are prepared.

Examples

Communication prepared in advance
1) For the first return of compacted waste to Belgium an information file was written in collaboration with Synatom, Ondraf and Belgoprocess.
Synatom manages the entire fuel cycle of the fuel for Belgian nuclear power stations:

- the front-end of the cycle, which ranges from the supply of uranium up to the supply of the enriched uranium for the manufacturing of fuel for power plants.
- the back-end of the cycle, which integrates the management of used fuel from its unloading of the reactor to its final storage, either under reprocessing waste form (closed cycle), or under packed assemblies in the case of direct evacuation (opened cycle).

The Belgian government wants to ensure that the general public is effectively protected from the potential hazards arising from radioactive waste. The management of this type of waste is therefore falls under its responsibility. Since radioactive waste management requires particular expertise, the task has been entrusted to a separate government agency created in 1980: the Belgian Agency for Management of Radioactive Waste and Enriched Fissile Materials, known by the French/Dutch acronym ONDRAF/NIRAS.

Belgoprocess, a private company founded in 1984 in the Belgian nuclear region of Mol-Dessel, offers integrated nuclear waste management and decommissioning services, driven by safety and backed by hands-on industrial experience.

AREVA was in charge of reprocessing of Belgian used fuel elements at the AREVA La Hague plant and in charge of the return of the waste to Belgium. TN international has thus designed the casks used to return the waste and organised the several return shipments of vitrified and compacted waste. This public info file was written to respond to the main questions arisen seen in the following titles:

1 Context
2 Belgian back-end cycle management
2.1 Used fuel management
2.2 Political choices
2.3 Intermediate storage in Doel and Tihange sites
2.4 Used fuel direct evacuation
2.5 Reprocessing
2.6 Financing
3 Compacted wastes
4 Compacted wastes transport between France and Belgium
4.1 Ensure the quality and safety before transport
4.2 The transport
4.3 TN™24DH transport cask
4.4 What are the applicable regulations for this transport?
4.5 What are the security measures for this transport?
5 Interim storage
6 High and intermediate long live activity waste long term management in Belgium

TN International was in charge of Part 4 of this report. TN International also prepared specific documents such as:

- a press leaflet describing the TN™24DH transport cask
- press releases to be sent at the starting of the shipment and at the arrival
- an internal Q&A card to be prepared to respond to any kind of questions concerning this shipment

All of these documents are not specifically written for crisis communication as waste return is always treated as a sensitive shipment but they will surely help in case of a crisis.

2) For the MOX transport to Japan info file, press releases have been also prepared. But what is really remarkable is the thorough work done by our Global Acceptance Department long before the shipments. The shipment may take three possible routes:

- Panama Canal
- Good Hope Cape
- Horn Cape

These three roads must be fully open, meaning that the potential Coastal States of each route must be visited to ensure that there will be no obstacles issue when the ship carrying the MOX fuel elements navigate off their coasts.

Crisis communication

Since the 90s, TN International has organised regular shipments between Pierrelatte in France and the Russian nuclear complex in Siberia. The products send to Russia are depleted and reprocessed uranium. These products are sent to Russia to be enriched. Of course all these shipments were made following all the international and national regulations and were declared to the French Ministry of Transport and to the Competent Authorities.

Since early December 2009, all the shipments organised between France and Russia have been attacked by Greenpeace. Attacks were of different types, demonstrations on railways, demonstrations in port, demonstrations in Russia and interviews in several local and national media. The issue was not concerning the shipment but concerned the depleted uranium let in Russia. On October 2009, the High Committee in the transparency and the information about the nuclear safety (HCTISN) has been asked by the French Ministry of Environment to collect the elements relative to the management of the materials and the nuclear waste produced in the various stages of the fuel.

From December 2009 to April 2010, all the shipments have been attacked. These actions hopefully ceased in April 2010 with a restraining order forbidding Greenpeace to go near AREVA ships in Le Havre port or in French territorial waters.

During the six months of Greenpeace demonstration, TNI shipments were under the spotlight and in the meantime we had to explain to the French Government why we sent uranium to Russia.

As a result, two main documents were prepared:

- An exhaustive Q&A card was enhanced with the events at each shipment. In the Q&A file, the AREVA spokesmen will most likely find the messages to be delivered in another similar event. The complete organisation of the transport, casks used, ship, material transported, regulations to be followed, quality, Safety and Security of the transport, etc…and also the history of all the events which occurred during the previous shipments.
- A report concerning the organisation of the shipments to be included in the AREVA report sent to the HCTISN.

Mid July 2010, the HCTISN gave its conclusions concerning our shipments to Russia, confirming that the depleted and the reprocessed uranium were not waste.

The Q&A file and report were easy to write because we already knew where to find pictures, key figures, datasheets on the materials transported, our ships used. When we didn't know where to find the necessary documents, we knew whom to ask.

Conclusion

External Communications you need a network. Not only a network, but several networks:

- an operational network, to know what goes on in your business
- a communication network to be sure that all the people who have to be informed are informed in due time
- an expert network, to have good explanations when needed
- an international network with the States and the Authorities

To be well implant is essential.
You have also to be prepared to any kind of crisis, media, technical or human crisis with environmental impact. Training is essential to reduce the stress when a real crisis happens.
On the fly communication is also essential, prepared with no stress it is your database in time of crisis even if it is not exactly the same type of transport you will surely find pre-existing elements of communication in documents already written.