

**THE ACCEPTANCE, BEFORE TRANSPORT, OF THE WASTE RADIOACTIVE
PACKAGES ON THE DISPOSAL FACILITIES OF ANDRA**

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ANDRA - National Agency for the Management of Radioactive Wastes - has in charge, among other missions, the long term management of disposal facilities, in France.

In 1992, two disposal facilities are operationnel :

- Le Centre de Stockage de la Manche, located near the reprocessing plant of La Hague, which is in operation since 1969, will be full in 1994,
- Le Centre de Stockage de l'Aube, which recently opened, will be in operation during about 40 years.

The most important producers are E.D.F. (the Power National Company), C.E.A. (Atomic Energy Commission), and COGEMA.

In order to be sure that all the packages conveyed to the disposal Centers are in accordance with the technical prescriptions and with the specifications elaborated by ANDRA, and with the double aim to respect the safety rules for the storage, and the regulation applicable to the transport of dangerous goods, the Agency set with the producers and with the carriers two procedures :

- on the one hand, a procedure for packages agreement, by computerized teletreatment.
- on the other hand, a qualification procedure, concerning essentially the drivers and the vehicles.

I - PROCEDURE FOR PACKAGES AGREEMENT

This procedure is applied up and down the transport operation, by computerized teletreatment (most of producers are directly connected to ANDRA by dataprocessing).

It is decomposed in four steps.

1 - Acceptance of the individual package

Each package is individualized when made, and has to be accepted by ANDRA.

For that purpose, the producer has to give to ANDRA the information related to :

- its designation : * origine (ex : process wastes produced by the operation of industrial facilities)
 - * identification number
 - * volume
 - * weight
- its composition : * waste nature (ex : plastics, cotton, filters...)
 - * embedding (ex : concrete, bitumen...)
- its radiological characteristics : * spectrum, date
 - * total activity
 - * activity of each isotope
 - * dose rate

ANDRA 's computer controls that all these data are in accordance with the specifications, and if this is the case, ANDRA accepts the package.

2 - Validation of the shipment

When the producer has a lot of same type packages, to organize a shipment, he sends to ANDRA the package numbers' list included in the shipment.

ANDRA 's computer then verifies that every package designated on this list has been previously accepted, and if so, validates the shipment.

3 - Confirmation of the shipment

When the packages are loaded in the vehicle, the producer confirms to ANDRA that he proceeds to the shipment.

The information related to the carriage are, in the same time, transmitted by the central computer, located at the headquarters of ANDRA, to the disposal center (both of the disposal centers are connected with this computer), that is to say :

- reference of the shipment,
- producer,
- packages : quantity and numbers,
- characteristics of each package : weight, nature of waste, origin, spectrum, activity.

By the way, the transport documents, where all these information appear, are given to the driver.

Each package bears a double identification :

- a clear identification,
- a zip code label.

4 - Control of the packages at the arrival

At the arrival at the disposal facility, each package is subjected to three controls :

- an aspect control, in order to verify that the package hasn't be damaged during the transport,
- a radiological control (dose rate, contamination), in accordance with the regulations for the safe transport of radioactive matériel,
- an identification control (by reading of the zip code by laser system), to make sure that any mistake occurred during the loading.

The storage of a package won't be authorized if any of these three controls reveals an anomaly.

This individualized and computerized follow of the waste packages offers the absolute benefit for the safety :

- it allows to verify, before storage, that each package respects the radioactivity limits authorized for the long live radioisotopes,
- it permits to make different statistics about the activity stored (whole activity, for each producer, for each disposal structure etc...).

II - QUALIFICATION PROCEDURE FOR CARRIERS

In order to get the highest level of safety in road transports, ANDRA established a qualification procedure for carriers. Only the carriers qualified by ANDRA are allowed to carry the wastes towards the disposal Centers.

When a carrier proposes its collaboration, ANDRA supplies him with a file recalling the applicable regulations and some practical provisions, in particular :

- driving personnel (formation - in France a special licence is required for driving vehicles loaded with radioactive material -, medical and radiological survey),
- vehicles (general condition, maintenance),
- specific equipment (stowing, protection, intervention),
- transport modalities (instructions for loading and unloading, accompanying documents, itineraries),
- special instructions in case of road accident.

An audit is then carried out by an approved organisation, in the presence of ANDRA. If this control gives evidence that the carrier satisfies the obligations specified in the qualification file, a certificate, valid one year, is delivered.

ANDRA makes a control prior to each renewal of the certificate. Unexpected verifications take place during this year.

Moreover, according to new regulations published by the International Atomic Energy Agency concerning the transport of radioactive material, quality assurance programs have been established by the carriers for transport operation. To assist them, ANDRA has drafted a quality assurance standard based on the ISO norm 9002, and on the French regulations for the transport of dangerous goods.

Beyond, ANDRA plays an important part in safety by maintaining a permanent staff, right and day on duty. This staff knows in detail the loading of every vehicle and is able to give any useful information about opportunity and conditions of a possible intervention in the case of an incident or accident (every year, about 80 000 packages of low and medium level wastes are carried in France).