

## **Chapter 4**

# **Collection and Transportation of Hazardous Waste**

## **4. Collection and Transportation of Hazardous Waste**

### **4.1 Current Conditions**

#### **4.1.1 Technical and Operational**

In Romania, there are very few and limited facilities dedicated for treatment and disposal of hazardous waste. Generally, generators of hazardous waste themselves 'dispose' of their waste at their own premises – either within factory sites or on company-owned land near to their factories. In this event, they collect their own hazardous waste, and transport it to their own sites. As a consequence, no enterprises have developed a substantive specialist transport service for hazardous waste generators. The exception to the above and the principal types of hazardous waste currently collected and transported now are healthcare wastes, used oils and batteries.

Waste collection agents appear to be generally private companies and are essentially local enterprises rather than national organisations. Most of the existing collectors in Romania are municipal waste collection and transportation contractors and these largely only collect municipal wastes. Some of these collectors also collect refuse-type wastes from commercial and industrial sources, park wastes and construction and demolition wastes. These contractors claim not to collect any hazardous wastes. There are waste recycling organisations that collect wastes from generators, some of these collect hazardous wastes, most notably waste oils, car batteries and, to a lesser extent, solvents.

There are a very small number of hazardous waste management contractors in Romania. Those that do exist generally offer waste collection but their transportation capacity is generally small. No dedicated haulage contractors have been identified who collect hazardous wastes. The remainder of hazardous waste transported is transported by the waste generators themselves. However, more than 80% of hazardous waste is deposited or stored and this generally happens at or close to the place of waste generation requiring minimal transportation. In the Directory of Romanian Transport 2002 ([www.transporturi.ro](http://www.transporturi.ro)), there is an ADR (European Agreement for international transport of hazardous substances) transport sector for hazardous goods (eg petroleum products). Nearly 200 companies are listed; international companies and ~70% of the Judets are represented. However, from a sample of telephone contacts with these companies none are involved with transport of hazardous wastes.

#### **4.1.2 Political and Legislative**

The legislative aspect of transportation of wastes is very recent and still developing. In respect of transport of wastes, Emergency Ordinance 78/2000 (amended by Law 426/2001) requires:

Art.9(3) Authorisations for activities involving waste collection, storage and treatment shall be issued by:

- Territorial authorities for environmental protection, for household waste, production waste and ;
- The central public authority for environmental protection for household waste, production waste and hazardous waste in case of the activities are carried out in an area larger than one county;

Art. 17.

(1) Within 90 days of the approval of the hazardous waste list, the competent authorities shall adopt adequate rules for packaging and labelling hazardous waste during collection, transport and temporary storage, according to the international regulations in force.

(2) The control regarding collection and transport operations shall be performed, in the case of hazardous waste, by the organisations empowered by the law and shall consider the origin and the destination of such waste.

(3) In the case of hazardous waste being transported from one place to another, a standard identification form should accompany the transport. The model of this form shall be approved by joint order of the central authority for transport and the central authority for environmental protection within 90 days of the date of the coming into force of this Emergency ordinance.

Art.22.

(1) The skilled transporters for the urban waste transport should be authorized by the local public administration authorities and environmental protection authorities. In case of interurban or international waste transports, the road transporter should have a transport license for dangerous goods issued by the Ministry of Transport.

(2) For the railway, maritime or air transports, the transporters should comply with the regulations set up by the Ministry of Transport and Ministry of Water, Forests and Environmental Protection.

Art.23. – The waste transporters have the following obligations:

- To use only adequate means of transport taking into account the waste type, that do not allow the waste spreading or noxious releases during transport so that they should comply with the standards concerning the population and environmental health;
- To provide the staff training for a safe waste transport and in order to ensure the interventions in case of failures or accidents;
- To have all necessary transport document including the owner, consignee, types of waste, place of loading, place of destination and, if appropriate, amount of waste and its legal code;
- Not abandon the waste on the route;
- To comply, for the dangerous waste transport with the regulations specific to the dangerous goods transport having similar characteristics;
- To use the shortest routes and/or presenting the lowest risk for the population and environment health that have been approved by the competent authorities;
- To have the necessary technical endowment for interventions in case of accidents or failures occurred during the dangerous waste transport or if they have not adequate technical endowment or staff, to ensure this by skilled units;

- To inform the environmental protection authorities about any dangerous waste transport, before its carrying out, as well as the fire fighters' units in case of explosive or fire risk waste transports.

Art.24. – The international waste transports are made complying with the international conventions to which Romania is a party. Articles 29~33 describe requirements of international trade and transit of waste being in accord with the provisions of the Law No. 6/1991 for the ratification of the Basle Convention regarding the control of trans-boundary shipment of hazardous waste and their disposal, and also of other international conventions ratified by Romania.

Further and under Art.44 (amended in Law 426/2001 as Art 42). – The Ministry of Transports has prescribed tasks.

Vehicle requirements, packaging, labelling, placarding, driver training are all as prescribed under the 'dangerous substances' legislation (GEO 200/2000 [on the Classification, Labeling and Packaging of Hazardous Chemical Substances and Compounds], approved and modified by law 451/2001 and used in conjunction with the provisions of GD 490/2002 for the approval of the methodological norms for enforcing GEO 200/2000.

#### **4.1.3 Institutional and Organisational**

The above requirements have not all been implemented. Currently, all transport operators are required to have a licence from the Ministry of Transport. An additional permit is required for transport of wastes. EPIs give such a permit for collection and transport activities' Applicants in the form of an Environmental Authorisation. In this document, the types of company activities are listed. This Authorisation document serves as permit for the companies to transport their own wastes. If an Applicant wants to do inter-city or international transport of hazardous waste, the applicant must obtain a transport licence for hazardous goods from Ministry of Transport as well. However, some EPIs require all Applicants of hazardous waste transport to submit photocopy of their licence for transport of hazardous goods obtained from Ministry of Transport, irrespective of whether in-city or inter-city transport. A further apparent requirement is that multi-county operators (eg Petrom) are required to obtain vehicle permits from each county EPI.

#### **4.1.4 Economic and Financial**

The following provision is made within the Waste Laws, (Emergency Ordinance 78/2000, amended by Law 426/2001), referred above:

##### Art. 13

(1) The costs for activities of waste collection, transport, landfilling, capitalisation or disposal activities shall be incurred by:

- a) Waste holders submitting waste to a specialised unit;
- b) Previous waste holder or manufacturer of products generating waste;

(2) The costs specified under par. (1) shall be covered:

a) Directly or by a contract drawn up with units specialised in collection, transport, landfilling, capitalisation or disposal of waste;

b) By a fiscal system of fees specified in Law No. 73/2000 on the environmental fund.

(3) Costs for waste analysis, own technology monitoring and monitoring of environmental factors and checking declared data shall be incurred by waste holders.

(4) If waste holders are unknown, the costs for environmental cleaning and rehabilitation shall be born by persons identified as current holders, until the perpetrator is identified; the latter shall bear also the costs born by the current holder, in order to identify him.

(5) If waste the generator cannot be identified, the natural or legal persons whose properties are effected may get financial support from local authorities and, *in the case of hazardous waste being involved*, from the environmental fund.

## 4.2 Issues

With relatively little wastes being transported for off-site disposal, Romania currently lacks the necessary skills and infrastructure for safe transport of hazardous wastes. Also, given the almost complete absence of large-scale hazardous waste transport in Romania, it is an area where the Environmental Protection Inspectorates understandably lack regulatory experience and capacity. The main issues for these activities in Romania are:

- How such a service to industry for waste transport to authorised treatment and disposal facilities should best be developed; and,
- How such collection and transport activities should be regulated and controlled to ensure that hazardous wastes in transit are safe and arrive at an authorised 'recovery / treatment / disposal' facility.

These issues span all 4 categories, and are briefly discussed below.

### 4.2.1 Technical and Operational

An integrated and adequate network of disposal installations will eventually require, for example:

- A full range of different types of vehicles (eg tankers, flatbeds, container vehicles)
- Transfer / temporary storage stations appropriate for hazardous wastes
- Vehicle / tank maintenance and cleaning services

The technical and operational measures required for this component (ie vehicles and supporting infrastructure) will be driven by demand in accord with implementation of the National Strategy and Plan described in this Report. Used oils and acid batteries are two waste streams with specific legislation prescribed in Romania where these actions could be implemented practically and with immediate effect to validate the integrity of the regulation and control system.

In order to minimise the costs and risks of transporting relatively small quantities of hazardous waste over long distances, consideration should be given to the development and operation of strategically located transfer stations. These will provide secure storage of wastes prior to their collection and final disposal/treatment at a centralised facility. Such transfer stations may also incorporate simple pre-treatment processes in order to reduce the volume and/or hazard potential of the wastes prior to onward shipment. Most member states have such facilities. Operational requirements of 'transfer stations' will be similar to those described for the storage activity of regional waste treatment centres.

#### **4.2.2 Political and Legislative**

The primary legislation is in place. The secondary legislation now requires completing and implementing in order to ensure effective regulation and control. One of the components of the Phare 2001 German Twinning Programme is to assist with this and the transposition of the Internal Transport requirements of the Waste Shipment Regulation.

Waste producers and others in the waste handling chain should be made legally liable for any environmental or health damage caused by handling, treatment and disposal of hazardous wastes. Producers should not be able to discharge their liability merely by transferring the waste to another party. They must be able to show that they have carried out their Duty of Care by ensuring that the 'other party' are able to, and will handle the waste in a safe manner and in accord with the relevant legal requirements.

It is normal in Europe to regulate and control the movement of hazardous wastes using a consignment notification and/or manifest system. Such a system may require enterprises to pre-notify, or at least report, the movement of consignments of hazardous wastes to the regulatory authority. The role of the regulatory authority is generally to ensure the 'closed loop' i.e. to make sure that the notifications indicate that the waste (including the correct quantity), once it leaves the 'source', arrives at the correct destination notification. This is intended to prevent illegal disposal of the waste. The system may also, in the case of a pre-notification system, allow the regulatory authority to veto the proposed movement or amend the instruction. Such a consignment or manifest system could in the future involve a significant number of notifications being received by EPIs. These notifications are also a potential source of accurate data on hazardous wastes. Such a system is ideal for incorporation into a computerised Waste Management Information System. A proposed hazardous waste information system is described in Chapter 7 of this report.

#### **4.2.3 Institutional and Organisational**

There are many potential stakeholders in this activity at local, regional and national level. For example: drivers who own their own vehicles, waste producers as haulers, specialist transport companies, waste management contractors, competent authorities etc. Developing and maintaining good communication links with ADR organisations will help these stakeholders.

The primary legislation must be supported by secondary legislation, standards and norms with guidance notes and training for all stakeholders, particularly those units with responsibility for regulation and control (eg EPIs and traffic police)

#### 4.2.4 Economic and Financial

Funding the infrastructure referred above is going to be private sector and likely to evolve from those sectors with existing knowledge of the issues, eg treatment facility operators, oil sector, recycling (eg REMAT). In that event, full cost recovery will be required and such costs will of necessity be passed directly to the waste producer.

#### 4.3 Objectives and Targets

Principal obligations under the EU Waste Directives are:

- Designate Competent Authorities (Focal Point)
- Establish a system for the supervision and control of shipments of waste to implement the Basle Convention and also within the national jurisdiction
- Give practical effect to the 'Polluter Pays' principle,
- Establish policy and technical standards, and
- Establish an integrated and adequate network of disposal installations taking into account geographical circumstances or the need for specialised installations for certain types of waste.

In accord with EU Waste Directives regulation is required to the extent that:

- All producers and undertakings transporting and collecting hazardous waste, either their own wastes or on behalf of third parties, shall be subject to the supervision and inspection by Competent Authorities; and to keep certain information for a specified period of time, and make it available to the Competent Authorities
- All hazardous waste transfers shall be accompanied by an identification form
- Mixing of hazardous waste is only allowed under permit
- Waste holders shall, in the course of collection, transport and temporary storage, comply with packaging and labelling requirements in accord with International and EC standards in force
- Producers of waste take responsibility for safe disposal or recovery
- Illegal traffic in waste is prohibited and punished

These requirements are collated in the following objectives and targets:



1. Methods and systems for the segregation, temporary storage, collection and transport of wastes to be sufficient to enable compliance with all European / national requirements for WM.
  - Adequate arrangements for segregating and separately storing specific types of

- waste prior to collection to be put in practice.
- Duty of care requirement to be introduced on transfer of wastes
  - Systems for segregating and separately storing recyclable materials at sources prior to collection to be developed.
  - Systems for the separate collection of hazardous materials from municipal waste to be introduced.
2. All services for the collection and transport of hazardous waste to become efficient and cost-effective.
- Prices/tariffs for collection of hazardous waste to reflect the true costs of the service provision (see section 4.4).
3. Prevention and monitoring of illegal traffic of hazardous waste
- Strengthening compliance measures related to Basle Convention.

#### **4.4 Strategy**

The transport requirements will largely stem from and follow the market demand and operational needs of the National strategy and Plan outlined elsewhere in this Report. This will determine the types and number of vehicles and their distribution, and the role of 'transfer / collecting stations'. The specialist nature of these vehicles, the additional driver training, and vehicle support requirements add to their investment and operational costs. Funding this infrastructure is likely to best achieved by those transport companies with ADR (European Agreement for international transport of hazardous substances) capability and/or those sectors with existing knowledge of the issues, eg waste facility operators, oil sector, recycling (eg REMAT).

The proposed strategy is based upon completing and fully adopting the hazardous waste legislation (including a consignment note or manifest system and Duty of Care) as well as the supporting regulations, standards and guidance notes, awareness raising and training in hazardous waste legislation and management, and rigorous enforcement. This strategy should be implemented with first effect on all existing hazardous waste movements which at this moment are primarily waste oils, healthcare wastes and used acid batteries. Implementation of this component should be in co-ordination with the activities of the two other specific EU donor projects (Phare 2001 German Twinning waste project and EU Life project in Caras Severin)

Hazardous waste management cannot be tackled cost-effectively at a local level. It should be approached at a regional or national level. The proposed Regional Waste Management Plans should include a section about the anticipated transport requirements for hazardous waste for that region. In all EU member states hazardous waste management facilities are provided on a regional or national basis; except where some of the smaller states rely on neighbouring ones for the more capital-intensive facilities, such as incineration. This will require the construction of 'transfer stations' previously described in section 4.2.1.



The types of costs associated with implementation of this strategy component are typically:

- Initial set-up costs
  - Establishment of Competent Authorities
  - Devising systems and procedures
  - Preparation of technical guidance notes
  - Training provision
  
- Capital investment
  - Transfer stations for the sorting and accumulation of small quantities of hazardous waste for further treatment
  - Collection and transfer systems for both liquid and solid hazardous wastes
  - Wtorage facilities at waste producers premises
  
- On-going operational costs
  - Annual operating costs of facilities
  - Periodic inspection of waste producers and carriers
  - Processing of consignment notes
  - Information and data collection