

Field services experience in Eastern Europe: A pesticide disposal operation in Bulgaria

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Introduction (background information on AVR)

AVR is a large international concern offering a wide range of products and services related to waste and the environment to industry, businesses and government. Our strategy is to grow as a stand-alone organisation to one of the three main waste- and environmental companies of the Netherlands, Flanders and a part of Germany as well as to become one of the top players in Europe. We are committed to achieve sustainable profitability and to create shareholders value.

AVR offers a comprehensive service in response to the demands of its clients, including consultation, site-management, industrial and maritime services, and the collection, transport, preliminary treatment, recycling, processing and storage of various types of waste. AVR also offers their clients tailor-made solutions for a number of specific waste issues.

These services will be offered within two Business Groups:

- Business Group Industry
- Business Group Public Sector & Companies

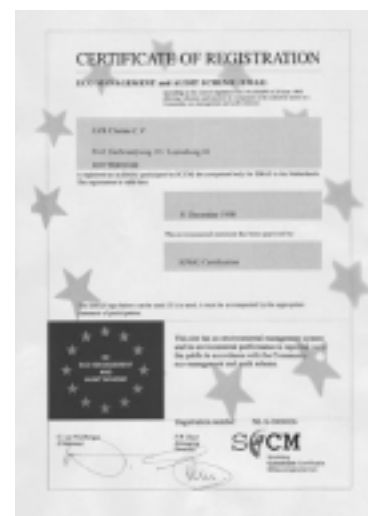
The Business Group Industry focuses on industrial companies in the Netherlands and abroad. It takes care of collecting all kinds of industrial and hazardous waste and offers national and international companies a complete range of services in the field of on-site waste management, industrial cleaning, logistics and maritime services.

AVR is by far the market leader in respect of the safe collection and processing of hazardous industrial waste. In addition, this division is a leader in the field of industrial cleaning. The combination of these two services is also relevant to many companies. Last but not least, AVR specialises in the collection, transport and processing of foreign waste (AVR-International).

AVR-International has special expertise and facilities for the international collection, shipping and high temperature incineration (and other treatment) of hazardous waste such as PCB's, pesticides, contaminated soil and for the clean-up of contaminated sites. Activities of AVR-International consist of the following six services: disposal, field services, inventory, transport, documentation and consulting. We work in accordance with "Lansink's Ladder":

1. Prevention
2. Recovery
3. Recycling
4. Incineration with energy recovery
5. Incineration without energy recovery
6. Landfill

Further we act following the highest quality standards and are ISO-14001 and BS-7750 certified.



Picture 1. EMAS-Certificate

Description of specifics in pesticides projects in Eastern Europe

In 2000 in Bulgaria we have removed the most dangerous types of obsolete pesticides as a joint operation between the Ministry of Environment of the Netherlands, of Bulgaria and some Bulgarian specialist companies. Illustrated by our experience at this project in Bulgaria, we will describe the specifics concerning the field services from the early beginning to the end. Central to our approach are the wishes and needs of our customer. Transferring experience and knowledge to our customer is also our focus.

1. Initial phase

- **Funding.** For many Central and Eastern European Countries (CEEC) there are funds available at the European Union. AVR can help these countries to obtain them.
- **Responsibilities.** Before commencing a pesticide project, it is important that the responsibilities of the different parties are clear.
- **Ownership.** In CEEC most stores of obsolete pesticides are an inheritance from the communist past. Nowadays, it is difficult to determine who are the owners of the stores, and who will pay for the disposal of them. It is our experience that this should be sorted out before any action can be done.



Picture 2. Repackaging activities in a store in Bulgaria

2. Inventory

- **Soviet pesticides.** As already indicated, most stores of obsolete pesticides are an inheritance from communist past. This has an influence on the inventory and recognition of obsolete pesticides. For us it is difficult to read the Russian writing and to know the specific details of Russian made pesticides. This puts a strain on the related classification for IMO-transport
- **Sampling & identification.** It is important to take sufficient samples for identification of the pesticides. It is needed for the proper TFS-documentation, packing lists and labelling. Also it is important for the incineration process.
- **Quantity.** With the inventory an estimation of the quantity should be made. This is important for the budgeting of the project, the ordering of sufficient equipment for repackaging of the waste as well as for an indication of time needed for field services.

3. Field services

- **Local companies.** We think it is valuable for the customer that during the project the country benefits from and learns from the experience of AVR. For AVR it is also difficult to know all local details in legislation and habits. For these reasons we prefer to hire local companies for the repackaging activities as well as for the local logistics (trucking etc.)
- **Packaging.** Obsolete pesticides are a hazardous waste type. Therefore the repackaging should be done in a safe and environmental friendly way. We use UN-approved high quality packaging like PE-drums. All packaging and repackaging activities are done according to international safety and quality standards.

4. Container loading

- **Stowing / lashing / securing.** Because of the hazardous character of the waste, and the big distances over which the waste has to be transported, extra attention should be given to the stowing, lashing and securing of the containers with the packed drums. It should also be done according to IMDG and ADR. AVR has much experience with this and will coach the customer through this process.
- **Solids / liquids.** For different types of waste, there are different requirements. AVR takes all this into account.



Picture 3. UN-approved 200 litre steel drums, a specially manufactured in Bulgaria for our project

5. Documentation (Documentation, licenses and customs clearance in Eastern European Countries)

- **TFS-procedure.** This procedure is complicated and takes a lot of time. The procedure for import in the Netherlands takes at least 70 days! AVR has employees that are specialised in this procedure. With our people you are sure that everything is done as properly and quickly as possible.
- **Packing list.** Because transport of hazardous waste is not common in most CEEC, AVR's project manager in the project county facilitates everything needed for the documentation that is applicable for transport.
- **Local requirements.** We prefer to use local companies for transportation and consulting because their knowledge of the local requirements is very essential for this process.
- **Legislation.** We act according to national and international legislation. Sustainability is an important part of the strategy of our company and we also take this into account at projects in other countries like Bulgaria. We act fully according to the Basel Convention.

6. Transportation

- *Sea transport*
- *Local transport*
- *Inland transport* (in the Netherlands)

For all three types of transport we use qualified companies and request high quality of them. All waste is transported according to international and national legislation (IMDG, ADR, UN). We have knowledge and experience in Eastern European countries of the applicable national and international legislation on environment, transportation, finance, taxation etcetera.

7. Disposal / recycling / re-use

According to the type of waste we choose the best type of disposal facility. If possible the waste will be recycled or re-used. For obsolete pesticides the best option is still high temperature incineration in the special rotary kiln incinerators of AVR.



Picture 4. Local transportation by truck of filled drums, according to ADR and UN-regulations

AVR approach

To meet the diverse needs of our clients in Eastern Europe and the rest of the world AVR uses the best and most modern methods and techniques. In the combination with large-scale worldwide operations, this is the way to minimise costs and charges, while all international regulations and norms, in terms of environment and quality are fully observed. The client can count on one-stop-shopping and on the large experience of our experts. We make a custom made solution to specific waste problems in every country through the right combination of services. This means that we act with in our mind the cultural specifics of the project country. Also co-operation and commitment of the government is crucial for the success of the project. In Bulgaria, the government was narrowly involved and we are convinced this has been vital for our success.

Project results & lessons learned

Resulting from our experience in the specific areas as mentioned before, we will give the results at finalising the project, the successful disposal of the wastes and especially the spin off in Bulgaria.

We have removed the most dangerous pesticides (for instance DDT) from six stores in Bulgaria. Knowledge transfer has taken place with the competent authorities in Bulgaria. Because of the close cooperation between AVR and local companies we have exchanged experience and knowledge in working with hazardous waste according to Bulgarian and international law. We have also learned that the cooperation and commitment of the national government is obligatory for the success of the project. Spin off in Bulgaria is, as we believe the awareness of the hazardous character of the stock of obsolete pesticides and the urgency to clean-up the stores. Further the knowledge and exchange of experience on all levels is an important spin-off. Now we are working together with our government as well as the Bulgarian government and the local companies on a new project for the rest of the stores with obsolete pesticides.