Motion Adopted by the Participants in the Third International Wetlands Conference*

Recognizing the international importance of the River Loire in terms both of its size and its biological richness;

Recognizing the scale of the development projects which are likely to direct both the short- and long-term integrity of the River's catchment;

Recognizing the absence of a comprehensive impact study on the possible consequences of these management projects;

Recognizing the effects of comparable projects in other countries and the current state of scientific knowledge of the international community;

Recognizing that France is a Contracting Party to the Ramsar Convention and a member of the European Community;

The participants of the Third International Wetlands Conference

— urge that, as a prerequisite to any further developments, a general study of the functioning of the River system be undertaken, including predictions of the impacts of the proposed developments;

— invite the French government to apply the European Community legislation and to include the Rivers of the Loire and the Allier on the List of Wetlands of International Importance.

* Rennes, France, 19–23 September 1988; published as an initiative that ought surely to be emulated elsewhere.—Ed.

'Valorga'—A Revolution in Treatment of Household and Industrial Wastes?

Some sixteen million tonnes of household wastes are produced each year in France—an average of *c.* 800 grammes per person per day—compared with an estimated 1.3 kilos per person per day in Europe as a whole, and 1.8 kilos in the United States. The elimination of these vast amounts of waste materials poses serious problems for local authorities, and yet this 'waste' represents an enormous potential for energy and agriculture.

At present such household 'waste' is dealt with in a number of ways, the most common being tipping into pits or dumps, and incineration. Each method has its drawbacks regarding protection of the environment, effective use of land, and the cost of the treatment, the last of which depends on the possibilities of marketing any by-products. The method developed by *Valorga*, a company established in May 1981, reconciles these drawbacks. Its process offers considerable advantages: in destroying the waste materials, it creates valuable by-products that result from methanization and serve as resources which can be directly exploited by municipalities and industry.

The *Valorga* method, a continuous system for the re-use of urban waste, combines two processes that take account of the waste's composition. One is non-stop *methane fermentation*, at a high concentration of dry matter, of the biodegradable content (vegetable matter, paper, cardboard, etc.), while the other is *combustion*, with special treatment of evolving smoke and of non-methanized matter (including wood or tissues with a high calorific value). Fig. 1 is a diagram of the layout.

The *Valorga* solution of the waste-disposal problem is interesting from the energy viewpoint as the biogas produced (60–65% methane) can be fed into the national gas-distribution network (Gaz de France), and hence employed for the production of heat or transformation into electricity. The system also produces homogeneous combustible waste (170 kilos per tonne) which the combustion chain can then transform into steam or superheated water for industry and heating systems, or into low-calorific energy for the heating of glasshouses.

The method is also of interest to agriculture, as it pro-

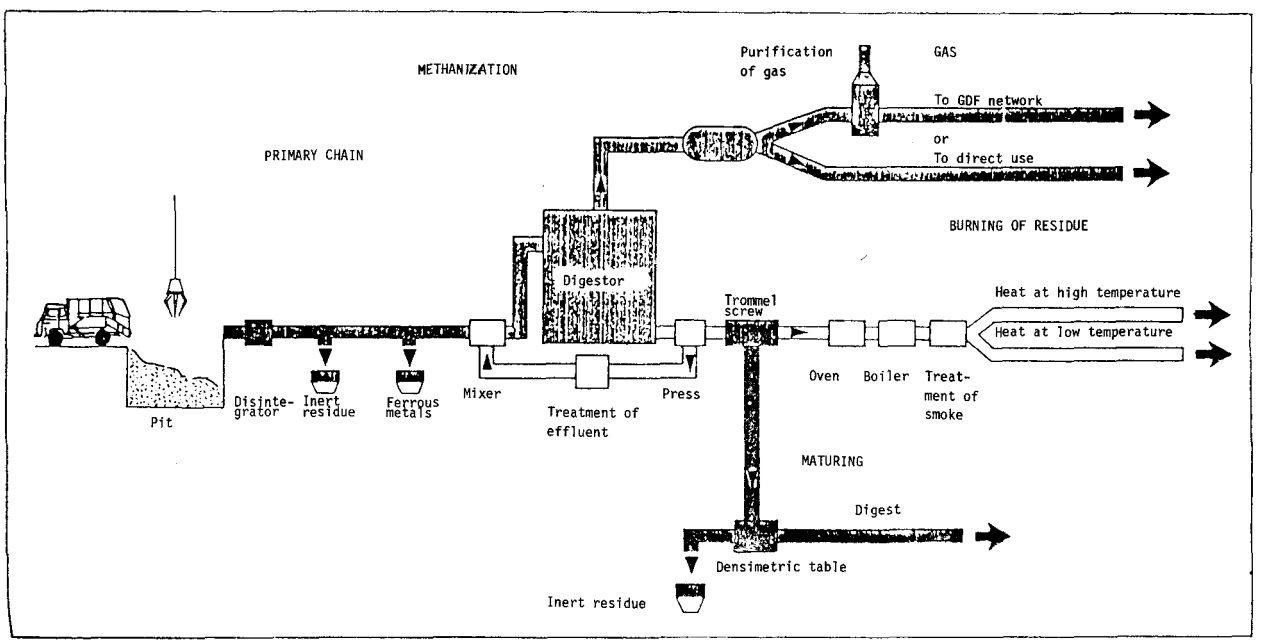

FIG. 1. *Valorga System for profitable disposal of urban waste.*

https://doi.org/10.1017/S0376892900008614 Published online by Cambridge University Press