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## **ESTABLISHING THE ROUTES FOR TRANSPORTATION OF HAZARDOUS GOODS ON THE BASIS OF THE RISK LEVEL**

**ABSTRACT:** This paper contains presentation of methodology, that is, the steps which have to be taken in order to establish the routes for transportation of hazardous goods. The selection of routes for transportation of hazardous goods is based on determination of the extent of risk. The model used for determining the risk level for the selection of routes is the work of Canadian authors, and it is modified and adjusted to the local conditions by the authors of the paper. In other words, the weightings of parameters which influence the probability of occurrence of incident situation and the extent of consequences are established on the basis of the experts' survey. The selection of routes is made on the basis of research of features of oil and oil derivatives transport demands, by means of the defined methodology.

**KEYWORDS:** hazardous goods, transport, risk, environmental protection.

### **INTRODUCTION**

Transport of hazardous goods is a kind of transport related to the highest risks and possible dangers for population and environment. In order to reduce possible consequences for population and environment from mobile sources of hazardous materials (transportation modes), it is necessary to establish the routes for their moving and that should be done on the basis of the level of risk acceptable by social community of a certain area.

In order to establish the routes for transport of hazardous goods within a certain area, it is necessary to conduct wide-ranging researches of features of transport demands for each class of hazardous goods and separately for each source. Also, it is necessary to determine the features of traffic flow (flow volume, structure), to explore demographic features (population and density) and to define sensitive areas. In addition to conducting wide-ranging researches, it is also necessary to define methodology for route selection based on determination of risk levels for each section within the considered route and to apply it to the local conditions, which is the actual aim of this paper.

### **PRESENTATION OF METHODOLOGY FOR ESTABLISHING THE ROUTES FOR TRANSPORT OF HAZARDOUS GOODS**

The methodology developed by the authors of the paper unites all possible elements which influence or might influence the selection of optimal route for road transport of hazardous goods. It consists of 11 steps (phases) and it is based on establishment of routes for transport of hazardous goods on the basis of absolute risk, that is, the risk which can be quantified (Table 1).

The first step to be taken within the methodology is to define the type of hazardous goods. Immediately it should be explained why the definition of hazard features and influential zone of hazardous goods represent the very first step in establishing the routes for transport of hazardous goods.

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