

Abstract:

Model for National Responsible Conduct of Hazardous Materials Holders

Prof. Amos Notea, Chairman of AFRAN – National Research Center for Disaster Reduction,
Holon Institute of Technology, amosno@hit.ac.il

A system for control and monitoring of entities holding hazardous materials was developed. The system is based on the principles of "Quality Management" and "Risk Management". Its objectives are to assure the safety and health of the public in the surrounding of the hazardous materials activities site, without diminishing the industrial activities.

The model is an extension and expansion of a previous model developed by me in 1993 for the accreditation of testing and calibration laboratories. This model was the basis for the Israeli National Accreditation Agency, ISRAC.

The present model was examined for nuclear power control systems existing in different countries and found to be satisfying.

If Israel had implemented it years ago the present confused situation with the Ammonia at the Haifa Bay would have been eliminated.

The Model describes the interconnections between the elements that are involved with the hazardous facilities. The certification and authorization based activities are briefly stated in the following.

The elements are:

- **Potential Risk Holder [PRH]:** This entity initiates the process by presenting risk reports [preliminary, final and periodic] based on its planned and preformed activities and the requirements of the regulator.
- **The Public:** The population living in the surroundings, the area to be exposed to the disastrous event. This entity states the "Acceptable Risk"
- **Regulator:** This is the Country's responsible entity for the certification, authorization, control and audit of the PRH's whole activities with hazardous materials. This entity presents to the PRH the appropriate requirements, threats [nature and hostile sources] and demands for third body insurance/liability.
- **Professional Body:** The aim is to examine the risk reports and to judge if the risk levels are lower than the stated "Accepted Risk"

The risks assessments includes the chain of consequence events: operational faults that activate secondary events, natural and hostile disasters that can trigger technological disasters [NaTech, HosTech].

The term Regulator refers to an entity authorized by appropriate law which grants the enforcement power.

At the presentation, the connections and interactions between the mentioned elements will be discussed. The terms: acceptable risk, certification, different risk reports, authorization for establishment of the facilities, authorization to operate for a given period [1-2 years], will be explained.

Obviously for establishing and implementation of the System described by the model a law is essential. For example ISRAC operates in Israel by the [Israel Laboratory Accreditation Authority Law, 5757-1997](#)