

Preface

Safety investigation of accidents

Salomon saith: There is now new things upon the earth. So that as Platon had an imagination that all knowledge was but remembrance; so Salomon gives his sentence that all novelty is but oblivion. (Francis Bacon: Essays LVIII)

Companies today must constantly seek to improve the safety of their activities. Learning lessons from their investigation of accidents has always provided a vital input to the improvement process. With the political institutions and the public becoming less and less tolerant of any accidents, the need for thorough investigations, which satisfy public expectations and generate confidence is increasing. Where reduction in the number of accidents is achieved, the need for companies to investigate incidents or near misses with the same thoroughness grows.

The purpose of the JRC/ESReDA Seminar on Safety Investigation of Accidents, held on 12–13 May 2003 at the European Commission's Joint Research Centre in Petten, Netherlands (JRC—Institute for Energy), was to provide a forum for presentation and discussion of all aspects related to the investigation of accidents and incidents for the purpose of learning safety lessons. It enabled presentation and discussion of harmonisation of EU safety policies and current and possible future requirements regarding accidents reporting and the possible need for production of guidelines. It provided an opportunity for cross industry sector sharing of experiences in the field including both good practice and identification of problem areas.

A large number of papers were received from all stakeholders (i.e. from industry, regulators, safety boards, universities, R&D organisations, engineering contractors and consultants) related to the following industry sectors:

- energy sector: nuclear and non-nuclear (e.g. fossil, hydro) power plants;
- oil and gas industry;
- transport (rail, road, air, maritime);
- chemical and petrochemical facilities;
- aerospace industry.

Major seminar topics were:

- Survey results of accident investigation across Europe and across industry sectors
- Regulatory requirements in different countries as well as on the European level
- Initiation, planning, execution and follow-up of investigations (incl. near misses)
- Methods for investigations
- Public trust
- Investigation across interfaces—companies public investigations and nations
- Databases and accidents investigations
- Safety lessons and risk analysis
- Relationship with police-legal investigations
- Expertise and training of investigators
- Conclusion of investigation—Safety improvement, measures and costs.

This Special Issue of the *Journal of Hazardous Materials* includes a carefully selected, edited and partly updated collection of papers presented at or proposed for the seminar. The objective of this publication is to analyse and cross-compare in a condensed form the different aspects of accident investigation across different industry sectors and areas of application with a view to identify common elements and possible gaps. This could be of use in assisting in the development of a common European approach to accident investigation, whose first steps are currently formulated on a European level.

The Special Issue starts with a background paper on the need for a European Union approach to accident investigations, followed by individual technical papers, grouped, as follows:

- cross-industry topics;
- energy sector;
- transport sectors (rail, air, road);
- process industry.

Eventually, summarising the main elements from these papers and the results of the discussions held at the seminar, perspectives for further research and development needs are presented.

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