Health and safety in the offshore oil and gas industry

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Since the 'Piper Alpha' disaster in 1988 the system of regulating occupational health and safety in the offshore oil and gas industry has been the subject of radical reorganization. The Health and Safety Executive (HSE) was given sole responsibility for the regulation of health and safety offshore; existing legislation was or is being reviewed and revised and new legislation has been implemented. The most significant of the new regulations, The offshore installations (Safety Case) regulations 1992, requires all operators to conform to a safety management system and safety case acceptable to the HSE. These safety cases are 'living documents' which should reflect the changing conditions on each installation and which must be resubmitted to the HSE every three years.

This reorganization led to an increased demand for relevant information to enable the industry to keep abreast of changes in the legislation, implement new requirements and also be aware of technological advances which have implications for future health and safety. During this period there has been substantial growth in the amount of health and safety information being published, but there is little published guidance on how to access material directly relevant to the industry.

During vacation employment in the Safety and Environment Department of a North Sea oil producer during 1993 the difficulties that can arise in identifying a particular regulation or in obtaining a specific document were experienced at first hand. Standard bibliographic tools do not identify sources of health and safety information specific to the industry and it was felt that further guidance would be beneficial.

Aim

The aim of this project was to create a document which would bring together the various strands of offshore safety and health, ie. the legislation, the organizations and the sources of information. This document would afford an insight into offshore health and safety and provide a bibliographic tool for finding information in that field.

The objectives were to:

- chart the development of offshore occupational health and safety legislation in the United Kingdom, placing it in context with health and safety legislation in general
- identify the organizations, both official and industry related, that are instrumental in shaping offshore health and safety legislation, examining their role and function, and
- identify the relevant sources of information.

Project plan

To achieve these objectives, a combination of strategies was employed:

- a literature survey was undertaken to gain background information on occupational health and safety in the UK and on the offshore industry

- a survey of the legislation was carried out to provide a history of legislative change in the offshore industry
- the subject was researched to identify organizations involved in the development of offshore health and safety legislation and identify sources of information on offshore health and safety
- contact was made with organizations involved in health and safety to determine their role and function; with publishers and other information providers to determine availability of relevant information; and with professionals working in the field of offshore health and safety.

Results

The dissertation is divided into three sections. The first section reviews the development of offshore occupational health and safety legislation from the mid 1960s when offshore exploration and production began, up to the reforms of the present day, setting it in context with UK occupational health and safety legislation in general.

Until 1991 offshore health and safety legislation tended to be reactive and restrictive, with many health and safety measures applicable only to the offshore industry and implemented after particular incidents, eg. the capsizing of the 'Sea Gem', the explosion on 'Piper Alpha', had established a need. Research revealed that onshore health and safety legislation had developed in a similar piecemeal fashion during the latter part of the 19th century and the first half of the 20th century. This had resulted in a complex body of law which was badly structured and which failed to keep pace with industrial developments and the relentless advance of new technology.

Following the recommendations of the Committee on Safety and Health at Work, Parliament enacted The Health and Safety at Work, etc Act 1974 (HSAWA). This enabling Act, to be enforced by the HSE, was intended to be the sole source of health and safety legislation; providing an umbrella for all sections of the community and encouraging industry and the public to adopt a proactive approach. The Act was not applied offshore until 1977 and its powers were limited, with Regulations only being applied offshore by agreement with the Department of Energy.

The Cullen Report[1] into the 'Piper Alpha' incident was to be the watershed which moved offshore health and safety under the umbrella of the HSAWA, enforcing the adoption of a goal-setting proactive approach by all participants. Lord Cullen recommended wide ranging reform of offshore health and safety legislation comprising two complementary elements, the progressive replacement of existing offshore legislation and the introduction of a new requirement for a safety case for each installation. The new offshore safety regime addresses risk analysis, hazard identification and safety management systems as a total safety system, with the purpose of reducing the risks to the workforce to as low as reasonably possible.

Part two examines the roles and functions of the official and industry-related organizations instrumental in the process of reviewing and revising existing regulations and implementing new legislation.

At national, European and international levels, there are official organizations in place with sections, committees or departments, eg. the Oil Industry Advisory Committee in the UK, working with industry to formulate new legislation and ensure that existing legislation keeps pace with

technological advances and the demands of modern society. These official organizations either have or support research and development programmes which are funded in full or sponsored jointly with the offshore industry, eg. the Offshore Safety Division of the HSE has a budget of about £7m per annum for research into offshore occupational health and safety. Information and advisory services are in place to disseminate occupational health and safety information to the offshore industry.

The industry has its own similar structures in place, conducting research into health and safety, producing its own standards and guidelines based on best industry practice or working with the official organizations developing legislation. In common with the official organizations, health and safety is not seen as a just a 'local' issue and there are industry groups, eg. EP Forum, active at international and European levels.

Occupational health and safety is a multi-disciplinary subject, covering a broad area of knowledge and encompassing topics as diverse as law and engineering. Relevant information can be found in many different presentations ranging from legislation to research reports and from British Standards to conference proceedings. There are therefore numerous resources, either paper based or electronic, to lead the enquirer to the sought information.

The final section identifies sources of authoritative and validated offshore health and safety information, providing bibliographic details. The listing of sources is divided into the following categories:-

- legislation
- books and pamphlets
- standards
- research
- reports,technical papers and conference proceedings
- journal literature
- statistics
- software.

The completed document is intended to serve as a guide to the development of offshore occupational health and safety legislation, to the organizations that support and develop this legislation and to the sources of information providing access to the legislation and its attendant literature.

Reference

1 Department of Energy. The public inquiry into the Piper Alpha disaster. (The Cullen Report). Cm 1310. London: HMSO, 1990.