

SIESO - Its history

In the years preceding the Second World War the belief was that there was little effective defence against enemy air attack (the bomber will always get through!). Accordingly, the Government established the Air Raid Precautions organisation in 1935: its name was changed in 1941 to the Civil Defence Service. It was a civilian organisation staffed by volunteers. At the height of the air attacks in 1941 there were 324,000 persons in whole-time Civil Defence and by 1944 these were supplemented by a further 350,000 women in part-time Civil Defence work.

Certain industrial sites would obviously be prime targets for attack. Many of these sites established groups of employees who would act as fire watchers to respond in the event of need.

At the end of the war in 1945 the need for a conventional civil defence organisation was reduced. It did not disappear – the development and deployment of nuclear weapons and the rise of the cold war ensured its survival.

In industry, one response was to form Civil Defence Units which were site-specific in their roles. There was also established a learned society, the Society of Industrial Civil Defence Officers (SICDO) which was intended to bring together like-minded individuals in the field. One aim of this Society was that members pooled their knowledge for mutual benefit. This Society certainly existed in 1954 and must have been formed before that date, probably in 1952. It lasted in that name until the end of 1975: during 1976 it changed its name to the Society of Industrial Emergency Services Officers (SIESO) (pronounced Sigh So).



The role of SIESO was again to enable practitioners in the field to join a forum in which they could work together for the common good. Possibly reflecting the limited options which could be taken following a nuclear attack, the Society concentrated its efforts in promoting the emergency planning processes which would provide a level of mitigation that could be built into an operation before the event rather than merely clearing up afterwards. The perceived emergencies changed to being industrial accidents or natural disasters, thereby broadening the involvement of the planners from the industrial site itself into the wider community at large.

On the 1st June 1974 a major explosion at Flixborough in Lincolnshire cost the lives of 28 workers on site (there would have been many more had it not been a Saturday afternoon). As a result of this incident the UK Government realised that with the increasing use of hazardous substances, such an incident could occur anywhere and at any time and that there was no overall picture of what and where hazardous substances were being used.

This led directly to the introduction of the Notification of Installations Handling Hazardous Substances Regulations 1982 (NIHHS).

The strategy for addressing the issues was **identify the problems, control the hazards then mitigate the residual risk**. This was an important concept and it has been adhered to ever since. It requires, first of all, that the sites with major accident potential are known.

The potential for a serious industrial accident to impact heavily on the surrounding area off site, was brought home in July 1976, when the Icmesa plant in Seveso, Italy, suffered a runaway in a reaction vessel and released a toxic cloud, containing high levels of dioxins, across the surrounding area. Although no immediate fatalities occurred, the public health costs of monitoring quarter of a million potentially affected people were estimated to be well over 100 billion lire.

Following this and other incidents the NIHHS regulations were followed in the UK by the introduction of the Control of Industrial Major Accident Hazards Regulation (CIMAH) of 1984.

Perhaps the most serious industrial incident ever, occurred in Bhopal in India in 1984, which led to the death of many thousands (some say as many as 10,000) of people living in the surrounding area, with up to 500,000 exposed to the escaping methyl isocyanate, further concentrated people's minds.

The European Community eventually made a formal response and was to write, promulgate and put into place a Directive. The preamble to this Directive stated:

Major accidents involving dangerous chemicals pose a significant threat to humans and the environment. Furthermore, such accidents cause huge economic losses and disrupt sustainable growth. However, the use of large amounts of dangerous chemicals is unavoidable in some industry sectors which are vital for a modern industrialised society. To minimise the associated risks, measures are necessary to prevent major accidents and to ensure appropriate preparedness and response should such accidents nevertheless happen.

This was the Seveso Directive. The Directive was given the force of law in the UK by the Control of Major Accident Hazards Regulations 1999 (COMAH) which replaced the CIMAH Regulations.

From 1982 therefore, in the UK there was formal recognition that emergency planning/management was not only possible but desirable. It was SIESO's aim to make this planning/management effective, structured and achievable.

In the furtherance of this, SIESO organised many well-attended events, seminars, workshops and site visits which promoted all aspects of emergency planning/management. This involved not only industrial site operators, but local authorities who would be involved in the land-use planning process and in the post event clear-up operation. It involved discussions and development of effective means of informing the public to the presence of a potential hazard and then alerting and informing them should that hazard materialise. SIESO was heavily involved with the COMAH Competent Authority (Health and Safety Executive and Environment Agency) and other Government departments, including the Home Office and later the Cabinet Office, in developing, revising and publicising appropriate standards, policies, guidance and instructions. It worked with other professional bodies, including the Institution of Chemical Engineers, many of whose members were active society members themselves.

The role of SIESO when working with these bodies was to be the conduit for an industrial viewpoint on statutory legislation and much of the legislation benefited from its pragmatic input.

The many conferences organised by SIESO reviewed serious incidents both national and international and enabled delegates to learn and discuss the lessons that these incidents highlighted.

Towards the end of its life SIESO promoted itself as an organisation that **Shared Information and Experience for Safer Operation**

It was the march of progress in the face of burgeoning communications technology which lead in 2017 to the eventual winding up of SIESO. It had achieved its aims. Hopefully too it had set a standard for others, particularly chemical engineers, to follow so that the undoubted benefits of chemical technology to all, are not overshadowed by accidental failure which affects the few.