

## Risk Management and the Concept of ALARP

Today, risk management is mandated in OHS matters (eg. *NSW OHS Regulation 2001*) and required in other areas of business (eg. Australian Stock Exchange's requirements for listing; Institute of Internal Auditors 2000 Guidelines).

In the OHS arena the law places very strict obligations on employers to “ensure safe systems”, with defences being centred on foreseeability, preventability and whether it was reasonably practicable to comply. The concept of ALARP – **As Low As Reasonably Practicable** – is frequently used in the risk industry as a yardstick for action, and to an extent is embodied in OHS legislation via similar wording.

Clearly there is no level at which “reasonably practicable” can be defined. A helpful starting point is to consider two extremes:

- A level where risk is minimal and can be accepted without specific treatment other than maintaining a watching brief.
- A level where risk is intolerable and the activity must cease unless the risk can be reduced.

ALARP relates to the band between these extremes. It is a question of priorities and a weighing of benefits versus outlays. Somewhere in the band there is a point where the benefits just equal the outlays – meaning that risks below that level, if treated, are done so on an “uneconomic” basis. Of course it is still practicable to treat these risks, and the law may not always be swayed by economic arguments.

On the other hand, governments and their agencies are influenced by both economics and public perceptions of acceptability. For example, the Civil Aviation Safety Authority (CASA) uses three levels of “acceptability” for fatal midair collision accidents at general aviation airports<sup>1</sup>:

- “Acceptable” level:  $10^{-4}$  accidents per airport per year
- “Scrutiny” level:  $10^{-2}$  “
- “Intolerable” level:  $10^{-1}$  “

Put another way, the “scrutiny” level means that these fatal accidents would be occurring once in one hundred years at each airport. Data shows that 55% of midair collisions are fatal, so the scrutiny level becomes one collision (fatal or non-fatal) in 55 years per airport<sup>1</sup>. Out of interest, the Australian Transport Safety Bureau (ATSB) reports that five midair collisions occurred at the five largest general aviation airports in Australia in the period 1981-2003, a rate of one in 23 years per airport<sup>1</sup>.

CASA is also reported as saying that for fare-paying passengers, fatality risk from midair collisions should never exceed the scrutiny level and should in any case be treated in accordance with ALARP to keep risks low. In setting these levels, CASA takes account of society's limited tolerance for multiple fatalities that can sometimes occur in such incidents<sup>1</sup>.

ATSB also reports that: “According to CASA, ALARP means that the risk would only be acceptable if the cost of risk reduction would exceed the improvements in safety gained.”<sup>1</sup>

## What can be learned from this?

- ALARP may require more than just an economic judgement about outlay versus risks reduced.
- Events that occur infrequently are always harder to foresee. Collective, industry-wide data is a must.
- Preventability (once foreseen) is a difficult issue. Controls such as rules and procedures have their limitations. Longer-term risk treatment actions need to be considered.

## What practical steps need to be taken?

- Set up systems to capture information from inside your own organisation. In particular, find ways to encourage near-miss and other incident reporting. In this regard, the aviation industry has a number of useful systems including GASSER (General Aviation System Safety Enhancement Report) and MEMS (Maintenance Error Management System).
- Set up systems to scan your industry, worldwide if necessary. The legal test of foreseeability obliges you to search widely for solutions that may have been implemented elsewhere.
- Set up systems for tracking the ever-changing regulatory environment – join industry organisations, scan websites, subscribe to electronic news bulletins.
- Monitor and act upon compliance failures. Treat them like product quality non-conformances. Recognise the risks of non-compliance.
- Set up a control assurance plan that looks not only at control procedures, but also at inherent implementation weaknesses in such procedures.
- Examine the risk profile of your business. Be particularly careful with infrequent events. Use industry-wide data.

## References:

1. ATSB Aviation Safety Investigation Report 200201846: Bankstown midair collision, 5 May 02.

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