

Health and Safety Executive Board Paper

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HEALTH AND SAFETY EXECUTIVE

The HSE Board

A PSA TARGET FOR MAJOR HAZARDS

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Issue

1. Development of a PSA target (PSA 2) for major hazards (MH) industries.

Timing

2. Immediate. Arrangements to run the target internally, for calibration purposes, should be in place as soon as possible to maximise the opportunity for evaluation before the PSA comes in to full operation from 2004 onwards.

Recommendation

3. The Board (i) endorses the approach being taken to develop the PSA target for major hazards as set out in this paper; (ii) agrees to the introduction of the shadow target set out in paragraph 12 for 2003/04 and (iii) agrees there should be external consultation with key stakeholders as the target is refined and delivery strategies developed (paragraph 10).

Background

4. In October the Board agreed HSC/E should develop a target for our major hazard activities so that HSE can reflect better the impact of our activity on these industries and account for an area of work on which 25% of HSE total staff resources and approximately 40% of operational staff are directly allocated (B/02/046 refers).
5. Since then DWP have been pressing for more rapid progress towards refining our existing PSA targets and they wish to see a target for major hazards introduced as soon as possible. Helpfully they have accepted we can: (i) "shadow run" the target internally during 2003/04 for calibration purposes; and (ii) include details for the major hazards target in our business plan for 2003/04 and beyond. The Minister and DWP officials expressed their satisfaction with the current state of development of the target when it was discussed at the latest quarterly performance review on 24 March 2003.

6. The work was remitted to OPD and taken forward in parallel with revision of current OPMs covering operational activity – see Board paper B/03/022. Subsequently, a team has been established to support DDG (Operations) in his role as the Board Champion for the new target. The terms of reference of the team also include the promotion of greater coherence in HSE's overall approach to regulation of major hazards.

Argument

7. Major hazards industries are characterised by very low rates of injuries to workers and the public. However, their activities all have the potential for catastrophic events. This means any measure of performance must be based on an expression of the level of control of the risks well before catastrophe occurs. For this reason it is proposed HSE uses “precursor events” – occurrences which, in general, do not result in death or injury but which have the potential to be far more serious.
8. However, we must be clear that, while precursors may provide relatively identifiable and measurable insights in to the way industry is controlling potential routes to catastrophic events, our approach towards regulating these industries must not be based solely on reducing their incidence. For example, we should continue to place importance on the attitudes of management to safety leadership that is clearly an aspect we cannot measure but we should seek to influence. And we should not use the incidence of precursors as the sole means of judging how major hazard industries are performing.
9. To be usable as a measure of performance pre-cursor events should relate directly to the risk(s) presented by the major hazard – in other words it must be reasonably foreseeable a given pre-cursor event could lead to a much more serious event. In general it has been possible to follow this approach except for the nuclear industry where “defence in depth” means that no single event can lead to more serious consequences – for this industry precursors will provide evidence about links in causative chains to potential incidents but it cannot be claimed that their occurrence is only a step or two from disaster.
10. They should also be sourced from reliable, preferably independently reported data – this is important for establishing baselines. Finally, it would also be preferable if they relate to existing industry targets, and, where this is not the case, industry support is obtained. This latter point is particularly important as, in common with the current PSA target, many parties will have a role in delivering improvements. We will need to consult externally to obtain this support, which in some cases, might be hard to obtain.
11. The target will cover nuclear, offshore, major onshore industries (primarily COMAH sites), and railways. Within these main categories there are several sub-categories, e.g. licensed nuclear sites include naval dockyards as well as commercial electricity stations. It is not proposed that the PSA target will cover every single industry within the sector – however, those included will be the most significant and will be representative of the broad spread of risks in the sector as a whole.

12. The diversity of events and variations in the number of reports received from each sub-sector means determining the relative contribution of each sub-sector will not be straightforward and this will require normalisation of the data. And the development of an overall numerical value for the target, which is obviously the preferred way in which it should be expressed, can be taken forward during the calibration year. In the meantime it is proposed the target is expressed in the following terms (which also reflects the continuing nature of HSE's work in this sector):

“To reduce still further the likelihood of catastrophic incidents in key major hazards industries regulated by HSE by having a sustained reduction in the occurrence of precursor incidents over the period 2004 - 2006”

13. The choice of pre-cursor events to use for each industry has not been straightforward. The directorates involved have had to tackle, inter alia: (i) the lack of suitable data; (ii) sensitivities among dutyholders about their performance being expressed negatively; and (iii) concerns that using some precursors might create perverse effects, e.g. counting reactor trips might influence operators to reduce the sensitivity of safety systems to reduce the number of incidents. This means there remains a little work to do in some cases to have everything in place for the calibration year - the current position is set out in the table below. Nevertheless it is submitted development is sufficiently advanced for the Board to endorse the overall approach proposed.

Sub-sector	Pre-cursors	Baseline	2006 Target	Resource applied
Nuclear	Based on non-compliances with nuclear operating licences – licensees must make arrangements to report incidents including any which infringe licence conditions	Approximately 50 instances of non-compliance/ per annum	To be decided	95%
Offshore	Hydrocarbon releases (major and significant)	112 major and significant releases/ annum (2001/02 baseline)	40% reduction	75%
Onshore (COMAH sites)	Suite of 7 RIDDOR reportable dangerous occurrences	177 reportable d.os/ annum (2001/02 baseline)	6% reduction	65%
Railways	5 main indicators – SPADS, track compromised, derailments vandalism, and level crossing incidents	211 SPADs; 872 track compromised; 99 derailments; 994 acts of vandalism; & 220 level crossing incidents	To be decided	70%

Notes:

- 1 NSD are working to develop baselines, targets and trajectories. The use of self-reported breaches of licence conditions is a refinement of earlier proposals to use reported incidents and is preferred to the latter as it filters out a number of reports which are more concerned with media-worthy incidents.
2. Hydrocarbon releases are already the subject of an agreed target between HSE and the offshore industry and significant reductions have already been achieved. Although the target date is 2006, in line with the other sub-sector targets, discussions are in hand to set a lower target for future years.
3. Onshore hazards are restricted to COMAH upper and lower tier sites. The conveyance of gas subject to the Gas Safety (Management) Regulations and mines are excluded. Gas conveyancing will be the subject of new regulations expected at the end of 2003 that will provide an opportunity to develop a target based on the impact of the new Regulations for later inclusion. The mining sector is felt to be too small to be relevant (and has relatively high rates of injury making the sector, in that respect, more like conventional industries).
4. The suite of 5 railway pre-cursors is drawn from the industry's own performance metrics. Aligning the PSA target to these measures is proving sensitive and the situation is fluid.
5. The estimation of the resources applied to each sector is an expression of the difference between activity that will influence progress towards the target and the total activity of the directorate/ division. For onshore the relatively low percentage of total resources reflects the relatively large impact of work associated with sub-COMAH sites.

Consultation

14. OPD have worked closely with PEFD throughout this work that has been assisted by a cross-OG working group. OMF members were consulted on the contents of the paper.

Presentation

15. The target will have to be agreed with DWP and HSC before it becomes “live” in 2004/05.

Costs and Benefits

16. No financial costs are involved in adopting the target.

17. The target will help HSE to demonstrate effectiveness in a key area of our work where direct measurement of our impact has proved difficult hitherto. And it will help act as a focal point for the development of HSE’s MH strategy.

Financial/Resource Implications for HSE

18. Development of the strategy needed to deliver the target is likely to involve considerations about the deployment of resources towards those activities that will produce the greatest results.

Action

19. The Board is invited to accept the recommendations in paragraph 3.