

PUBLIC COMMENT

Consultation on the model Work Health and Safety Regulations relating to Major Hazard Facilities

Instructions

To complete this online submission:

- Download and save this submission document to your computer.
- Use the saved version to enter your responses under each question below. These questions are from the [Consultation Paper on the model Work Health and Safety Regulations relating to Major Hazard Facilities \(MHFs\)](#).
- Once you have completed your submission, save it and upload it using the upload your submission link on the [Engage submission form](#).
- You can also upload any other documents needed to support your submission to the [Engage submission form](#).

Submissions will be accepted until **11:59 pm (AEDT) on Thursday 3 November 2022**.

Help

If you are experiencing difficulties making your submission online, please contact us at chemicals@swa.gov.au.

Respondents may choose how their submission is published on the Safe Work Australia website by choosing from the following options:

- submission published
- submission published anonymously
- submission not published

For further information on the publication of submissions on Engage, please refer to the [Safe Work Australia Privacy Policy](#) and the [Engagement HQ privacy policy](#).

Please note the following are unlikely to be published:

- submissions containing defamatory material, and

- submissions containing views or information identifying parties involved in hearings or inquests which are currently in progress.

Your details and background

(Please leave blank if you wish to remain anonymous)

1. Name or organisation

Riskom International Pty Ltd

2. Email used to log into Engage

████████████████████

Questionnaire

(Consultation document questions)

Your response should identify the specific regulation/s involved and, where possible, provide evidence to support your statement.

Evidence demonstrating issues raised in the Review (Section 4.1)

4.1a) What evidence do you have of inconsistencies in the application of the model WHS Regulations relating to MHFs across jurisdictions?

The evidence is in the various State regulations.

With the exception of Queensland and South Australia explosives regulation, Western Australia appears to be the only State in which some discretion is applied to the application of the Standard. Other States take the typical MHF approach of mindlessly following procedures: “Does the site have more than the threshold quantity of dangerous goods on site?”

If so, it is an MHF.

And with that answer comes the bureaucratic nightmare and unjustifiable expense of the MHF licence fees.

4.1b) What are the issues around duplication for businesses with MHFs, particularly those that fall under multiple jurisdictions?

the regulators in each state apply the rules differently. Victoria is the worst, particularly WRT explosives with a threshold around 5 tonnes.

4.1c) What concerns do you have with expectations of what should be included in a safety case?

[Click or tap here to enter text.](#)

4.1d) What duplication or overlap is there between the MHF Regulations and other legislation?

[Click or tap here to enter text.](#)

4.1e) What do you consider contributes to regulatory complexity for MHFs?

Mindless application of the thresholds, then mindless application of the processes.

Technical and administrative amendments needed in the MHF Regulations (Section 4.2)

4.2a) What administrative or technical changes could be made to the current MHF Regulations to improve application and consistency of the MHF laws across jurisdictions?

take explosives out of the MHF criteria in any case where Quantity/Distance tables are applied. Either that, or allow explosives separation distances to be determined by risk assessment. (I do NOT endorse the latter approach).

4.2b) What other non-regulatory changes could be made (e.g. additional or improved guidance) to improve application and consistency of the MHF laws across jurisdictions?

align the threshold quantities of ammonium nitrate with AN Emulsion both to 2500 tonnes

remove packaged goods from the formula for assessing thresholds.

Align the thresholds for liquefied gases with subrisk 5.1 with that of oxygen.

more details in attached sheet.

Other issues with the model WHS regulations for MHFs? (Section 4.3)

4.3a) How well do you think the current model MHF Regulations meet the intended policy objectives outlined in section 2 of the model WHS Act, particularly with advances in technology and emerging industries?

haven't looked at the Act so don't know the objectives. my observation is that most states use MHF regs primarily to raise revenue. the cost/benefits ratios I have observed are that the costs to industry enormously outweigh the safety benefits.

4.3b) What other issues do you have relating to the model MHF Regulations that were not raised in the [Review of the model WHS laws](#) or otherwise addressed in the previous questions?

see attached sheet.

- What changes to the model MHF Regulations do you consider would address these issues?

unfortunately they are only model regs. so each State will continue to do its own thing.

- What new or updated guidance would assist in addressing these issues?

some comments above. others in attached sheet.

4.3c) Are there any aspects of jurisdictional MHF laws or international regulatory frameworks for MHFs that you think should be considered for the model MHF Regulations?

the framework is sound. the application is abysmal. I would like clearer policy guidelines on identifying MHFs. Major Hazards which are sites that:

- in the event of an accident could have significant off-site effects;
- involved complex interacting procedures; and
- where simple regulations were inadequate to effect adequate safety.

regardless of the quantity of DG on site, if the site does not meet any one of these criteria, then it is not an MHF.

Riskom International Pty Ltd Submission on the Model WHS Laws for MHFs.

Riskom International Pty Ltd is a private company that has been active in explosives and dangerous goods safety laws for over 20 years. The Director of Riskom International Pty Ltd is Ken Price, who was the Chief Inspector of Dangerous Goods and Explosives in Western Australia from 1990 to 2000, the period when the National Standard and National Code of Practice for the Control of Major Hazard Facilities was being drafted. Ken Price has personally been active in explosives and dangerous goods safety laws since 1975.

This submission briefly sets out areas of concern that have been identified in the application of the Major Hazard Facilities elements of the model WHS laws.

Background

When the National Standard was developed it was understood that the application of the Standard needed to be done with due consideration of the balance between hazards and risks. Major Hazard sites were identified by applying the principles developed by the UK Advisory Committee on Major Hazards which were sites that:

- in the event of an accident could have significant off-site effects;
- involved complex interacting procedures; and
- where simple regulations were inadequate to effect adequate safety.

This interpretive approach was primarily because the “blunt tool” approach by applying Tables 1 and 2, though effective for an initial screen, would not accurately reflect the potential safety threats to the public.

With the exception of Queensland and South Australia explosives regulation, Western Australia was, and remains, the only State in which some discretion is applied to the application of the Standard. Other States take the typical MHF approach of mindlessly following procedures: “Does the site have more than the threshold quantity of dangerous goods on site?” If so, it is an MHF.

And with that answer comes the bureaucratic nightmare and unjustifiable expense of the MHF licence fees.

Areas of particular concern are set out below.

Issue 1 Explosives

Explosives magazines become Major Hazard Facilities above 50 tonnes of class 1.1. (I understand that Victoria has unilaterally reduced its threshold to 5 tonnes.) However all explosives storage facilities are controlled by specific explosives safety laws that apply quantity distance criteria. These criteria are based on “worst case” conditions. Should the magazine explode, it is far enough away from exposures so as to cause minimal damage. A risk-based approach is rarely warranted for explosives storage, and if it were applied using a quantitative risk analytical approach, then separation distances would be reduced enormously, to the detriment of public safety.

Recommendation: remove explosives facilities from Chapter 9 of the Model WHS Regulations, with such exclusion to be defined in Section 530 of the Model Work Health and Safety Regulation to facilitate national consistency of application.

Issue 2 Ammonium Nitrate Emulsion, Suspension or Gel (ANE) (UN3375)

Over the past 40 years, explosives technology has developed and improved safety enormously. Nitroglycerin based explosives have all but disappeared and new water based explosives ‘precursors’ or ingredients are used for the manufacture of explosives. These products are known as Ammonium Nitrate Emulsions, Suspensions or Gels (ANE) and are classified as Class 5.1 oxidising solids.

Schedule 15 of the Model WHS Regulation lists both specific and generic entries with associated threshold quantities for determination as major hazard facilities. While ammonium nitrate (AN) has a threshold quantity of 2500 tonnes, the safer ANE product has a threshold quantity of just 200 tonnes by virtue of its inclusion in the generic entry of ‘oxidising materials’ of Class 5.1, Packing Group I or II. The assignment of Packing Group II is completely arbitrary, based on a 30 second remark in a working group meeting or the United Nations Subcommittee of Experts on Transport of Dangerous Goods to align them with the equally arbitrary Packing Group II applied to explosives.

In the mining areas of the country 200 tonnes storages of ANE are quite common and they are easily and safely managed by adherence to a very effective Code of Practice developed by explosives regulators and industry.

Fortunately the pestilence of mindless application of the MHF Standard has not overtaken Western Australia so some common sense is being applied and they are not treated as Major Hazard Facilities, however many of my clients have operations in other Australian States and they have the Major Hazard Facilities regulations inflicted upon them at significant cost with insignificant safety benefits.

Recommendation: Significantly raise the threshold for applying the MHF regulations to storages of ANE and align it with ammonium nitrate.

Issue 3 Identification of an MHF.

Schedule 1, S1.2 give the criteria for calculating the quantity of dangerous goods that may contribute to determining if a site is an MHF.

This includes all dangerous goods in packages as well as tanks and process vessels etc. Of itself, this should not present a significant problem if the regulator is prepared to apply some discretion and common sense. Unfortunately such characteristics don’t seem to be in great supply in the MHF regulatory area.

Thus, the nonsensical situation arises where a gas company may have a large quantity of cylinders for flammable gases on its premises and be determined to be an MHF. Even 200 tonnes of LPG in cylinders (half of which would normally be empty on a typical site, however they must be counted as full) could never present a significant off-site risk.

The risks from the cylinders will be limited to the effects of a few cylinders exploding at a time, there is no significant risk of any fire or explosion escalating to a catastrophe and the safety at the site can be managed by simple regulation and adherence to an Australian Standard.

There are some (very few) cases where packaged dangerous goods may display cumulative effects with potential significant off-site consequences. Ammonium nitrate is one example. Thus, some form of regulatory control of packaged dangerous goods will need to remain for cases where they may generate a significant off-site effect, however these are exceptional.

Recommendation: remove, or qualify Section 1.2.c from the MHF standard or its equivalent in the WHS regulations so that packages of dangerous goods are not considered when assessing the MHF threshold.

Issue 4 the generic category of Liquefied Gases of Sub-risk 5.1

The threshold level for Liquefied Gases of Subsidiary Risk 5.1 seems to be completely anomalous. The specific threshold level for compressed or liquefied oxygen (Class 5.1 dangerous goods) is 2000 tonnes. However the threshold for generic gases with a sub risk 5.1 according to Table 2 is 200 tonnes. One such generic gas is liquid air (80% nitrogen).

Recommendation: either specifically list liquid air with a threshold same as liquid oxygen or adjust the generic threshold to 2000 tonnes.

I would be happy to expand on any or all of these issues should you wish.

Ken Price
Riskom International Pty Ltd
10 October 2022