

2018 Review of the model WHS laws

Qenos Submission – 29 March 2018

Summary

Clause 343 Labelling hazardous chemicals—pipe work is overly prescriptive and the labelling/signage requirement is impractical for large scale facilities such as chemical manufacturing and petroleum refineries.

Details

Clause 343 Labelling hazardous chemicals—pipe work of the Model WHS Regulations prescribes that pipe work needs to be “identified by a label, sign or another way on or near the pipe work”.

Legislation should, wherever possible, identify the concern and require the owner/operator to eliminate or control the risk exposure by means best determined by the owner/operator. Using such a risk based approach allows for the full context of the operation to be taken into consideration rather than specifying an isolated prescriptive requirement as is the case with the current wording of clause 343. Whilst not explicitly stated, the concern being addressed by the clause is the need to make persons aware of the hazardous chemicals that are contained within the pipe work so as to mitigate against those persons being exposed to the hazardous chemical contained therein. Not only are there ways, other than signage and labelling, to address this concern it can be argued there are more robust and holistic ways, to address the concern of chemical exposure - methods that do not suffer from the well-known limitations of low order controls such as signage and labelling. Of additional concern is the diminished responsibility of the owner/operator and potential transference of liability to the regulator by enacting this type of non-risk based, prescriptive legislation.

In addition to the shortfalls of prescriptive legislation, the clause in question is impractical, cost prohibitive and inessential for large scale chemical manufacturing and petroleum refining facilities. A typical chemical manufacturing facility can contain hundreds to thousands of lines of pipe work. Much of this pipe work also requires insulation to conserve heat, control noise or protect personnel from hot surfaces (*Clause 209 Guarding and insulation from heat and cold*) adding complexity to labelling and signage. Pipe work may contain mixtures of chemicals rather than single pure components, in addition the composition may change in real time depending on production grade slates and altered feedstocks rendering static labelling inadequate and potentially misleading or so generic as to be of little value. Pipe work may extend for hundreds of metres and change elevation, which raises the question of how often should a label be applied along a length of pipework and with what changes in elevation, aspects not addressed in the prescriptive wording of the clause rendering the clause ambiguous and inadequate. Also, pipe work must be regularly inspected and maintained. Due to the amount and complexity of pipework far more sophisticated systems including Piping and Instrument Drawings (P&IDs), isometric drawings, pipe work registers, line numbering systems (which include unique identifier, insulation requirements, fluid type, pipe specification), etc. are used to identify and manage

pipe work at these types of facilities. The Safety Management System *Permit to Work* ensures that pipe work is appropriately isolated and decontaminated prior to maintenance personnel opening and working on pipe work. Excavation permits involving surveys to identify underground services (pipe work, power, etc.) are required before ground is penetrated. Facilities typically use a grey colour to signify process pipe work (assumed to contain hazardous chemicals), in addition, selective use of alternative colours on piping may be used to identify particular chemical hazards (e.g. use of yellow to denote piping that carries a Class 4 pyrophoric material). These systems of work are mature and have been used by industry for many decades and do not necessarily involve the labelling and signage in the manner prescribed by Clause 343.

It is also important to recognise the context in which the pipe work is operated and maintained. A pipeline that leaves the owner/operator's site boundary and traverses public land clearly requires signage and labelling that includes a general warning, identification and contact details prior to digging, etc. Whereas pipe work within the perimeter secured premises of a chemical plant or refinery presents a very different context including:

- Visitors are inducted and escorted at all times,
- Contractors are inducted and must work under a Permit to Work system,
- Operators are trained and competency assessed to ensure a thorough understanding of the chemical hazards, including how the process works and what is contained within the pipe work that they are operating

The chemical plant/refinery context allows for, indeed demands, a different approach to the identifying and controlling of exposure to hazardous chemicals contained inside pipework.

In the References section provided below there is a survey of current and former legislation in NSW and Victoria as it relates to this clause or its equivalent. The current Victorian OHS Regulation *Clause 160 Identification of hazardous substances in plant* clearly states the concern and allows the owner/operator to determine the means by which identification will be achieved *importantly without prescribing the type of control to be applied*. The repealed NSW OHS Regulation *Clause 173 Employer to identify hazardous substances in enclosed systems* used a similar approach. It is only the current Model WHS Regulation (Clause 343) and similar state regulations (e.g. NSW WHS Regulations *Clause 343 Labelling hazardous chemicals—pipe work*) that both fail to clearly state the concern as well as over prescribe the type of control to be used. The current wording of the clause does include a “so far as reasonably practicable” test which may be used to support not applying labels and signage to every line of pipe work however the framework of the WHS clause places an unnecessary burden upon owner/operators of complex facilities to make a defence when they choose not to apply the prescriptive method set out in the clause.

Recommendation

Restore the original intent of the OHS Regulations, clearly stating the concern and allowing the owner/operator to determine the means by which the risk exposure of hazardous chemicals within pipework is identified and controlled.

References

Model Work Health and Safety Regulations (as at 28 November 2016)

343 Labelling hazardous chemicals—pipe work

A person conducting a business or undertaking at a workplace must ensure, so far as is reasonably practicable, that a hazardous chemical in pipe work is identified by a label, sign or another way on or near the pipe work.

Maximum penalty:

In the case of an individual—\$6 000.

In the case of a body corporate—\$30 000.

Victoria: Occupational Health and Safety Regulations 2017 (S.R. No. 22/2017)

160 Identification of hazardous substances in plant

An employer must ensure that a hazardous substance contained in a pipe, piping system, process vessel, reactor vessel or any plant that forms part of a manufacturing process is identified to employees who may be exposed to the substance.

Repealed NSW Occupational Health and Safety Regulation 2001

(Repealed version for 7 June 2011 to 31 December 2011)

Chapter 6 Part 6.4 Clause 173

173 Employer to identify hazardous substances in enclosed systems

An employer must ensure that the identity of any hazardous substance contained in an enclosed system at the employer's place of work (such as a pipe or piping system, or a process or reactor vessel) is notified to a person who could be exposed to the substance.

Maximum penalty: Level 1.

NSW Work Health and Safety Regulation 2017

(Current version for 29 January 2018 to date)

Chapter 7 Part 7.1 Division 2 Subdivision 3 Clause 343

343 Labelling hazardous chemicals—pipe work

A person conducting a business or undertaking at a workplace must ensure, so far as is reasonably practicable, that a hazardous chemical in **pipe** work is identified by a label, sign or another way on or near the **pipe** work.

Maximum penalty:

- (a) in the case of an individual—\$6,000, or
- (b) in the case of a body corporate—\$30,000.