

AIOH Submission

WHS incident notification

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Who we are

Occupational hygienists are the main frontline professionals who assess worker exposure to health hazards to prevent ill health through science-based investigation and testing of the efficacy of risk controls.

The [Australian Institute of Occupational Hygienists Inc \(AIOH\)](#) is the largest professional body for the scientists and engineers dedicated to protecting the health of workers in Australia. Established more than 40 years ago our members are at the coal face of health and safety assessment and risk reduction, working in metropolitan, rural and remote locations. We are in a unique position to understand the true nature of workplace health hazards and the efficacy of the protection against occupational illness provided to Australian workers.

The AIOH is the certifying body ensuring professional occupational hygienist competency and maintains registers of professional members and Certified Occupational Hygienists (COH)[®] to assist organisations seeking to engage the most highly skilled occupational hygienists.

Our mission is to promote healthy workplaces and protect the health of workers through the advancement of the knowledge, practice and standing of occupational health and occupational hygiene. The AIOH is a founding member of the International Occupational Hygiene Association and many Australian occupational hygienists are engaged in occupational hygiene research with international collaborators. The AIOH brings world-wide experience and insights on a range of traditional and emerging occupational hygiene issues.

Submission

Q1. Should exposure to hazardous substances in the workplace that cause latent diseases be recorded and reported? If so, for which substances?

Exposure to hazardous substances can have serious health implications that may not become apparent until years after exposure. This is recognised in the model WHS regulations in many areas, for example:

- Obligations that require employers to maintain records of exposure to hazardous substances in the workplace for 30 years (r50).
- Recording exposures to authorised carcinogens (r387), with many regulators extending this to include in the licensing program that spills are reported.
- Reporting disease, injury or illness relating to hazardous chemicals listed in Schedule 14 to the regulator, noting that for specific substances, a personal exposure history must be obtained as the first element required for that health monitoring (r376).
- Requiring monitoring of hazardous chemicals (other than those in Schedule 14), where there is a risk to health and a valid way of determining the effect on workers' health (r368).

The model WHS regulations require records to be kept for time periods longer than many businesses may operate. For example:

- Assessment reports, including:
 - Atmospheric monitoring r50 (30 years)
 - Health monitoring r378 (30 years)
 - Asbestos (40 years)
 - Exposure to a restricted carcinogen r388 (30 years)
- R376 (Hazardous Chemicals), R413 (Lead) R442 (Asbestos)

While levels of compliance with the above requirements are unclear, the recent cases of silicosis suggest that compliance, at least with that disease, have been historically low.

We observe that many of the above existing legislative obligations are not supported by guidance information. The knowledge of what should be reported may be poor for PCBU's and those undertaking the monitoring or the resultant diagnosis of disease.

The AIOH recommend that additional guidance be developed in addition to employing strategies to enable effective enforcement of the existing Regulations.

Q2. How are exposures to hazardous substances currently measured in the workplace (for example, air and health monitoring)? Do you have suggestions for options to improve monitoring to provide a better understanding of exposure to hazardous substances in the workplace?

Exposures are measured through air monitoring and/or biological monitoring as appropriate to the hazardous substance.

Air monitoring

Exposures to hazardous substances should be conducted by persons suitably qualified and experienced in the sampling technique, using approved and validated methods such as those published by Australian Standards. The analysis of collected samples should be conducted by laboratory facilities accredited by the National Association of Testing Authorities (NATA) for the specific test using appropriate validated methods.

Based on results obtained from the air sampling, correct interpretation of the sampling results by a competent person is essential in order to determine compliance or otherwise with a Workplace Exposure Standard (WES) and whether control strategies are required to eliminate or reduce exposures. The AIOH has published information to support occupational hygienists in this area [1] as have regulators in other jurisdictions^{1,2}.

A key gap that exists at present is information for PCBU's to understand when compliance with the WES has been achieved. At present, the regulations and associated guidance materials are silent on how an employer should demonstrate compliance.

To expand on this: most occupational exposure monitoring measurements are represented in a "*lognormal*" distribution. This type of distribution is more disperse than a "*normal*" distribution, and generally a larger number of measurements are needed to gain the same confidence about an estimate of exposure than would be the case for a normally distributed population. A lognormal distribution has a long tail stretching out to the right. The 'average' isn't in the centre, but rather somewhere along the side. With this type of distribution, data is more spread out and can even have some very large values. So, simply taking a few measurements of a workgroup and gaining results just below the WES does not mean that the exposures to that workgroup are below the WES with an acceptable degree of certainty. [1]

¹ HSE UK, Monitoring the control of exposure to hazardous substances, available [here](#)

² HSE UK, Control of substances hazardous to health regulations 2002 – General enforcement guidance and advice, available [here](#)

The AIOH recommend that SWA address this gap through the production of guidance material or model Codes of Practice for example. Some good examples are available from other jurisdictions³.

Health monitoring

At present, Safe Work Australia provide *health monitoring guides* for 34 individual substances. [2] This is significantly more than the substances requiring health monitoring in the model WHS regulations.

We note that Safe Work Australia have published guidance on a further 14 substances for health monitoring that are not included in Schedule 14, it is unclear why.

It is imperative that Schedule 14 of the model WHS regulations be updated to include all hazardous substances that require health monitoring.

Q3. With regards to air monitoring, how are exceedances of the WES captured? Do you think recording and reporting WES exceedances is a good way to identify exposure to hazardous substances in the workplace? What other ways could exposures be recorded and reported?

At present, exceedances of the WES are typically captured in a report which may be documented by an occupational hygienist. In some industries, exposure monitoring data is captured in electronic databases for ease of interpretation and intervention. Exceedances of the WES may also be entered into a site incident reporting system with some specific hazards also being notified to the regulator. For example, systems mandated by Resources Safety and Health Queensland (RSHQ) and the Government of Western Australia Department of Mines, Industry Regulation and Safety (DMIRS) currently require all exposure data to be provided. The NSW Resources Regulator currently have legislative requirements to report exceedances for a limited number of contaminants.

The AIOH have supported the need to amend WHS legislation to report exceedances of the WES to regulatory authorities. Most recently, the AIOH supported the activity contained in the *National Silicosis Prevention Strategy National Action Plan* which included the mandatory reporting of exceedances of the WES for RCS to jurisdictional regulators to be documented in legislation, and for regulatory action to be taken in response to

³ WorkSafe NZ Health and exposure monitoring, available [here](#)

exceedances of the WES for RCS. This has been discussed in many of our previous submissions. [3-6] [7]

Our support for this was reinforced through a study of our members in 2022 which spanned many industries including engineered stone, construction, tunnelling, mining and quarrying sectors. The mandatory reporting of exposure exceedances was reported as one of the top two most effective regulatory preventative strategies that occupational hygienists supported. [8]

Unlike the requirements to notify WHS Regulators of an exceedance of criteria for asbestos in air monitoring, there are no legislative requirements to notify a WHS regulatory authority of a WES exceedance outside of the resources sector. A national exposure notification register could alert Regulators of this issue at the time of exposure, thereby enabling intervention to prevent the onset of disease. We note that any notification system to an authority must be appropriately funded and resourced to enable effective intervention to be taken by the regulator.

We partially agree with this statement in the consultation paper with the exception that it is *biological* monitoring, rather than *health* monitoring that is the indicator of exposure, *“air and health monitoring are preferable ways of detecting exposures and health impacts from substance exposure (rather than disease diagnosis) as it allows for early identification of potential harm, provided the monitoring is undertaken at regular intervals. It also supports WHS regulators in investigating the workplace in a timely manner, as close as possible to the time of exposure. The incident notification review noted that any additional reporting requirements for WES exceedances may be better explored as part of air and health monitoring regulations, rather than under incident notification or periodic reporting requirements”*.

However we also raise the important point that the collection of exposure exceedance data (only) does not adequately reflect the exposure risk in workplaces. Without any knowledge of the number of measurements from which exceedances were drawn there is a significant risk of bias. There is evidence that denominator blindness affects perceptions of occupational risk. [9] For example, 10 exceedances of the WES in a workplace with 1,000 measurements would be less of a concern than 10 exceedances of the WES in a workplace with 10 measurements.

Additionally, without regulatory oversight supported by government occupational hygienists of exposure assessment programs, it is entirely likely that PCBU's may attempt to reduce their compliance risk by;

- Not conducting any exposure assessments, or;

- Manipulating the sampling regime (collecting only a few samples – unrepresentative sampling, best case sampling), or;
- Disputing the validity of any unusual measurement.

Our members have reported instances of the above following the introduction of state regulations prescribing exposure monitoring and mandatory reporting.

We also note that a risk assessment should precede monitoring activities and that monitoring is not the only way that exposures can be recorded and reported. A site walkthrough or audit can identify potential exposure to hazardous substances, for which the immediate focus should be on eliminating or otherwise minimising those exposures.

Q4. Should PCBUs be required to keep records of statement of exposure documents and make them available for inspection by the regulator? Should the statement of exposure requirement be broadened from prohibited or restricted carcinogens to include other substances which are known to cause long latency diseases? If yes, how should these substances be identified?

PCBU should be required to keep records of statement of exposure results and make them available for inspection by the regulator.

We recommend that the statement of exposure requirement should be broadened to include all substances listed in Schedule 14, and all carcinogens, mutagens, and reproductive toxins.

In circumstances where the PCBU ceases to exist, there should be mechanisms for that information to be transferred to secure and accessible storage. These mechanisms used to exist in some jurisdictional legislation (e.g. NSW Occupational Health and Safety (Hazardous Substances) Regulation 1996, r29(2)).

In addition, the AIOH supports the mandatory reporting of exposure measurement results and evidence of provision of the results to workers

References

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3. AIOH, AIOH Submission to the Consultation Regulation Impact Statement Managing the Risks of Respirable Crystalline Silica at work. 2022.
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