



# NTGC - what to do?

ACTU Submission to the Safe Work Australia Non-Threshold  
Genotoxic Carcinogens – Public Survey

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## Introduction

Since its formation in 1927, the ACTU has been the peak trade union body in Australia. There is no other national confederation representing unions. For 90 years, the ACTU has played the leading role in advocating in the Fair Work Commission, and its statutory predecessors, for the improvement of employment conditions of employees. It has consulted with governments in the development of almost every legislative measure concerning employment conditions and trade union regulation over that period.

The ACTU consists of affiliated unions and state and regional trades and labour councils. There are currently 43 ACTU affiliates. They have approximately 2 million members who are engaged across a broad spectrum of industries and occupations in the public and private sector.

## Recommendations

1. The ACTU recommends that a policy framework be developed, like that used for review of Workplace Exposure Standards. The methodology could then be applied to individual substances.
2. The current regulatory framework for all carcinogens needs reviewing and aligning with the higher order control measures such as elimination and substitution.

The ACTU strongly supports the application of the principle of “as low as reasonably possible” for the control of exposures to Non-Threshold Genotoxic Carcinogens. As by definition, there is no safe level of exposure, the highest level of controls must be applied, i.e. elimination or substitution.

3. In the interim, as these Non-Threshold Genotoxic Carcinogens will no longer be assigned a workplace exposure standard, all the carcinogens referred to in the consultation paper must be added to a restricted carcinogens list.

## Overarching comments

The ACTU appreciates that stakeholder consultation is essential to scoping the options for how the WHS regulatory framework deals with NTGC, however, we are not convinced this is an efficient method to employ in this circumstance.

The use of a survey with open ended questions about specific compounds/chemicals is hard for workers and their representatives to answer with any accuracy. Unfortunately, the ACTU and affiliates do not have access to workplace data to make informed decisions, as this information is in the hands of regulators and/or PCBUs. Without this information and without a policy framework to guide decisions, it is not possible to decide whether a substance should be on a prohibited or restricted carcinogen list, or what health or biological monitoring is the most appropriate for individual chemicals.

The ACTU notes that in the Review of the WES a methodology was agreed which was then applied to individual substances. SWA also established a clear methodology for the definition of NTGC. This is portrayed graphically in Figure 4 in the paper entitled *WES Review 2018 Non-threshold based genotoxic carcinogens*.<sup>1</sup>

The ACTU recommends that a process similar to that used for review of Workplace Exposure Standards be used. Of course, this may necessitate the use of expert consultants.

### **Recommendation 1**

The ACTU recommends that a policy framework be developed, like that used for review of Workplace Exposure Standards. The methodology could then be applied to individual substances.

### **Challenges for workers and their representatives when responding to the survey.**

The ACTU and affiliates would prefer to be in a better position to answer the questions in the survey. However, our challenges include the following:

- Access to workplace data is very difficult for groups outside of workplaces. This information is also likely to be unknown or unclear to workers and their health and safety representatives.
- Numbers of the NTGCs listed are used in the manufacture of or as intermediaries which increase the likelihood that workers are uninformed of either the chemical or its inherent characteristics.
- It is very likely that workers and employers are unaware of PAHs and other carcinogens that are generated as byproducts e.g. CTPV, Diethyl sulfate, Dimethylcarbanyl chloride.

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<sup>1</sup> WES Review 2018 Non-threshold based genotoxic carcinogens Accessory document to Recommending health-based workplace exposure standards and notations  
Australian workplace exposure standards and advisory notations Safe Work Australia (2018)

- Some chemicals are highly specific and probably have limited usage and therefore the number of workers potentially exposed would be limited and unlikely to respond to a survey of this kind, i.e. survey needs to be very targeted e.g. Catechol, Propane sultone.
- Some chemicals/compounds are generated by many sources, e.g. PAH from diesel engine exhaust, burning fossil fuels, asphalt and fires, so all the potential exposures are hard for us to identify.
- The survey does not list all the sources of chemicals, rather is an indicative list only. For example - the Health Monitoring Guide for chromium (inorganic) lists the following exposures that may require special attention: welding, cutting and hard-facing of stainless steel, manual metal arc welding of high chromium steels, chrome plating , refractory production, addition of cement to gravel and sand to make concrete, leather tanning, timber preservation using, for example, copper chrome arsenic, chromate use in the textile industry and chrome pigment use, for example in paints (it is acknowledged that some industrial processes no longer use some Cr VI compounds). This comprehensive list of potential exposures is not included in the survey.

### Current Regulatory Framework for Carcinogens

The current regulatory framework for carcinogens relies on the Hazardous Substances Regulations with the listing of 9 prohibited carcinogens and 11 restricted carcinogens,<sup>2</sup> the requirement, in certain circumstances, to conduct health monitoring for some substances (Schedule 14) and a short Guide on Managing Risk of Exposure to Carcinogens in the Workplace.<sup>3</sup>

The following paragraphs highlight some of the deficiencies in our current framework.

#### Schedule 10

It is very unclear what policy framework has been applied to make the distinction between prohibited and restricted carcinogens (note we are not arguing against such a distinction or the relative merits about which chemical should be on which list).

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<sup>2</sup> Schedule 10 WHS Regulations

<sup>3</sup><https://www.safeworkaustralia.gov.au/system/files/documents/1702/guide-managing-risks-exposure-carcinogens.pdf>

During our deliberations on these NTGCs it has become clear that Schedules 10 and 14 fail to “cover the field”. The deficiencies occur across a range of sectors:

- Care industries such as nurses and pharmaceutical workers who have potential exposures to hazardous medical products, or
- Industrial type jobs such as welding and asphaltting.

The current Schedule 10 includes one hazardous medical product, cyclophosphamide, but other IARC Group 1 carcinogens are missing, e.g. azathioprine, chlorambucil, melphalan etc.<sup>4</sup>

Some of these hazardous medical products are the subject of regulatory review in other countries – e.g. Europe:

*In order to help employers meet their obligations, the European Commission has to publish European guidelines for the safe management of Hazardous Medicinal Products (HMPs) at work, including cytotoxics, by the end of 2022, and must draw up a definition and establish an indicative list of HMPs that are CMRs, no later than 5 April 2025.<sup>5</sup>*

Ethylene oxide, a NGTC, is still used in the health industry and is not on either schedule 10 or 14.

### **Health Monitoring**

Workers in the asphaltting industry are potentially exposed to a range of carcinogens, including NTGCs, e.g. benzene, 1,3 butadiene, PAHs. A 2019 environmental scan<sup>6</sup> indicated exposure to bitumen fumes can lead to lung and skin cancers. The scan reported that the health monitoring conducted in the industry is limited to:

*Pre-employment medical checks and health surveillance such as audiometric tests every two years and spirometry tests every four to five years. If the doctor perceives further investigations required, crews may go for X-rays.<sup>7</sup>*

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<sup>4</sup> <https://www.cdc.gov/niosh/topics/hazdrug/default.html>

<sup>5</sup> <https://www.etui.org/publications/etuis-list-hazardous-medicinal-products-hmps>  
[https://www.etui.org/sites/default/files/2022-10/The%20ETUI%27s%20list%20of%20hazardous%20medicinal%20products%20%28HMPs%29\\_2022.pdf](https://www.etui.org/sites/default/files/2022-10/The%20ETUI%27s%20list%20of%20hazardous%20medicinal%20products%20%28HMPs%29_2022.pdf)  
<https://www.stopcanceratwork.eu/wp-content/uploads/2020/10/ETUI-Briefing-Note-HMP-CMD4.pdf>

<sup>6</sup> Bitumen contents and fumes Health effects associated with exposure to bitumen, ISCRR, March 2019, Table 4, page 17

[https://research.iscrr.com.au/\\_data/assets/pdf\\_file/0008/1856564/bitumen-contents-and-fumes-health-effects-associated-with-exposure-to-bitumen.pdf](https://research.iscrr.com.au/_data/assets/pdf_file/0008/1856564/bitumen-contents-and-fumes-health-effects-associated-with-exposure-to-bitumen.pdf)

<sup>7</sup> Ibid page 28

The Health Monitoring Guide for PAHs lists examples of activities involving PAH exposure that require attention when assessing exposures - coke plant work, aluminium primary plants, tar roofing, asphalt road surfacing, diesel emissions, and contaminated land remediation.

The Health Monitoring Guide for PAHs recommends:

- Records of personal exposure, including photosensitivity
- Health advice, including recognition of photosensitivity and skin changes
- Urinary 1-hydroxypyrene.

These tests were not reported by industry in the 2019 environmental scan. The ACTU and the industry affiliate have no information which would indicate that there has been significant change since 2019. Similarly, the ACTU and affiliates are not aware of any diesel mechanic undergoing the recommended health monitoring.

It is important to recognise that Health Monitoring is not required unless there is a “significant risk”<sup>8</sup> to the workers’ health. There is no guidance or information provided on how to decide what is a “significant risk” for either carcinogens or particularly NTGCs, for which, by definition, no safe level is known/available.

For individual substances it may be very difficult to prescribe health or biological monitoring. This is because epidemiological data may be able to show increased rates of some cancers after many years of exposure but only if there is a large enough pool of exposed people. For some agents there may be *in vitro* tests such as increased sister chromatid exchanges. This issue is not canvassed in the current regulatory framework.

### **Guidance**

The Guide to Managing Risks of exposures to Carcinogens<sup>9</sup> provides PCBU with a scant framework on how to control risks to carcinogens. Given that cancer is often a serious health outcome, it is anomalous that there is such limited information for PCBU on how to meet their duty of care. This is particularly pertinent for NGTCs, for which there is no known safe level, but the health outcomes can include loss of life.

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<sup>8</sup> Regulation 368

<sup>9</sup> Ibid

Our regulatory framework includes regulations and codes for exposures that are non-life threatening (note we are not arguing against having those Regulations or Codes of Practice). The approach to the development of Regulations and Codes has included the severity of the risk, e.g. risk of falls from height and known risk control measures to eliminate or minimise the risk. NGTCs meet the threshold test of severity of risk, the means of control will vary between individual substances, e.g. some may be easily eliminated or substituted, other such as hazardous medical products will require engineering and lower level controls. There is nothing in our regulatory framework that assists with the decision making around elimination or substitution of NGTCs. Some of these tools exist overseas<sup>10</sup> and need to be explored and reviewed for implementation in Australia.

## Recommendation 2

The current regulatory framework for all carcinogens needs reviewing and aligning with the higher order control measures such as elimination and substitution.

The ACTU strongly supports the application of the principle of “as low as reasonably possible” for the control of exposures to Non-Threshold Genotoxic Carcinogens. As by definition, there is no safe level of exposure, the highest level of controls must be applied, i.e. elimination or substitution.

## An interim approach for the control of NTGCs

The ACTU acknowledges that development of a methodology will take time but during this hiatus NGTCs will not be listed on a schedule and will not have a workplace exposure level (WEL).

This creates a regulatory vacuum for a group of substances which are recognised hazardous substances for which the possible outcome of exposure, at low levels, is cancer. This is not acceptable.

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<sup>10</sup> KEMI Swedish Chemical Agency <https://www.kemi.se/en/guidance-for-companies/substitution-of-hazardous-substances#:~:text=and%20the%20environment-.What%20is%20substitution%3F,new%20techniques%20or%20other%20processes.>  
OECD <https://www.oecd.org/chemicalsafety/risk-management/substitution-of-hazardous-chemicals/>  
Canadian Centre for Occupational Health and Safety <https://www.ccohs.ca/oshanswers/chemicals/substitution.html>  
SIN List <https://sinlist.chemsec.org/>



### **Recommendation 3**

The ACTU proposes that the list of NTGCs that are to be removed from the WEL list be added to Schedule 10.2 and/or 10.3. There would need to be a review of substances to decide which chemicals were added to each of these Schedules.

### **Conclusion**

The removal of NGTCs from the WEL list is supported however, in doing so this has highlighted significant deficiencies in our policy decisions and regulatory framework for the control of exposures to carcinogens but particularly NTGCs.

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