IN THE DISTRICT COURT
AT WELLINGTON

I TE KŌTI-Ā-ROHE
KI TE WHANGANUI-A-TARA

[2023] NZACC 54 **ACR 26/22**

UNDER	THE ACCIDENT COMPENSATION ACT 2001
IN THE MATTER OF	AN APPEAL UNDER SECTION 149 OF THE ACT
BETWEEN	STEPHEN MCLENNAN Appellant
AND	ACCIDENT COMPENSATION CORPORATION First Respondent
AND	ALLIANCE GROUP LIMITED Second Respondent

Hearing: 27 March 2023
Held at: Auckland/Tāmaki Makaurau

Appearances: P Schmidt for the Appellant
I Hunt for the First Respondent
S Winter for the Second Respondent

Judgment: 4 April 2023

RESERVED JUDGMENT OF JUDGE P R SPILLER
[Claim for work-related gradual process injury - s 30(2), Accident Compensation Act 2001 ("the Act")]

Introduction

[1] This is an appeal from the decision of a Reviewer dated 13 January 2022. The Reviewer dismissed an application for review of Alliance Group Ltd (AGL)'s decision dated 17 December 2012 declining cover for Mr McLennan's work-related gradual process injury as a result of exposure to glutaraldehyde.

Background

[2] Mr McLennan was born in 1956 and worked as a shepherd from around 1984.

[3] In early 2005, Mr McLennan commenced work at a freezing works plant. He was employed essentially as a shepherd at the marshalling yards, where sheep were received from trucks and prepared for the freezing works chain. After off-loading, sheep were gradually moved towards the chain, via a series of pens, involving, at some points, cleaning procedures. Mr McLennan's work-place activities included spraying sheep with an agricultural product which contained glutaraldehyde.

[4] On 30 July 2008, Dr Stephen Dawson, GP, recorded that Mr McLennan reported chest pains, coughed up blood and had a headache.

[5] On 6 November 2008, Dr Dawson recorded that Mr McLennan reported constant headaches, chest pains, and coughing up blood.

[6] On 20 November 2008, Dr Dawson recorded that Mr McLennan reported headaches, sore throat, burning in the chest, racing heart, and a constant headache. Mr McLennan noted that he had contacted the poisons centre and "his symptoms are consistent with glutaraldehyde".

[7] On 8 December 2008, Dr Dawson recorded that Mr McLennan reported headaches and very inflamed nasal mucosa.

[8] On 10 December 2008, Mr McLennan, with the assistance of Dr Dawson, sought cover for personal injury due to "exposure to chemical fumes" on 1 December 2008. In a separate claim lodged by Dr Dawson, it was submitted that there had been "exposure to glutaraldehyde in spray". In February 2009, Mr McLennan stopped working at the plant.

[9] On 8 July 2009, AGL, as an accredited employer, made a decision declining to grant cover on Mr McLennan's claim. AGL accepted that Mr McLennan may have experienced various symptoms following exposure to the detergent-based glutaraldehyde product. However, symptoms *per se* were not evidence of injury and

it was not satisfied that his symptoms could be shown to have been caused by a physical injury.

[10] On 13 June 2011, AGL's decision was quashed on review. The Reviewer considered that AGL had not properly investigated Mr McLennan's claim and directed, *inter alia*, that he be referred to:

(1) a respiratory specialist to carry out respiratory function testing ("RFT"); and

(2) an occupational physician to investigate Mr McLennan's claim and explore whether there were systemic toxic effects, before issuing a new decision.

[11] On 17 December 2012, AGL (after the required process had been completed) declined Mr McLennan's claim for cover for a work-related gradual process injury resulting from exposure to glutaraldehyde, on the basis that there was no evidence that his symptoms could be causally linked to a physical in jury and in particular glutaraldehyde.

[12] On 25 August 2017, counsel for Mr McLennan engaged Dr Gil Newburn, Neuropsychiatrist, to provide an opinion on what diagnosis best fitted Mr McLennan's symptoms and presentation; what was the most likely cause of these symptoms; why Mr McLennan's symptoms persisted well after his exposure to stockwash stopped; and the usefulness of patch testing and respiratory testing to determine glutaraldehyde poisoning.

[13] On 31 October 2017, Dr Newburn reported:

> Mr McLennan presents with a neurotoxic syndrome secondary to exposure to glutaraldehyde. At the age of fifty-two he had an onset of symptoms, in a familiar work environment, with no prior evidence through his life before this set of symptoms that he was an individual subject to abnormal illness behaviour. There is no evidence previously of any dependency seeking behaviour, not of the use of medical or surgical symptoms in order to foster an avoidance of work responsibilities, or indeed of life responsibilities generally. Rather, the opposite is the case. Following exposure to glutaraldehyde, he developed a set of symptoms, also reported by others in his workplace, and in other environments (e.g. Judgement of Judge Nicola Mathers) which are

consistent with data set out in other documents (e.g. Department of Labour Guidelines on Occupational Use of Glutaraldehyde), and other research (Glass, 1997) in a New Zealand setting. He presents with a typical range of symptoms seen in neurotoxic syndromes, which match also those described by Glass (1997), and a course that is typical for those who have developed neurotoxic syndrome from a broad range of organic solvent compounds.

Dr Beasley, while sitting on the fence somewhat initially, provides an opinion that the concentration of glutaraldehyde as measured in the work environment was too low to be associated with injury. Unfortunately, this relates only to a general statistical measure, and takes no account of individual's sensitivities. It is notable in the work environment that there was no protective clothing, and masks to provide respiratory filters. Therefore, and whatever the air concentration showed, there is no specific measure of personal exposure. While it is second-hand information, the information is nevertheless that others developed similar, albeit less severe, symptoms within the same environment, with the exception of the case referred to by Judge Mathers.

There is no evidence of any other disorder. While there is some anxiety in relation to his symptoms, this is commensurate with his symptoms, and is not an abnormal reaction. It has not prevented his return to work, and is not associated with any other disabling process. There is no evidence for depressive illness, or any other psychiatric process.

I note other assessment has ruled out an allergic skin or respiratory reaction. He does continue to have upper respiratory symptoms, but it is outside my expertise to comment on these further. I do note however that the absence of evidence for an allergic reactivity bears no relationship to the development of a neurotoxic syndrome.

Response to specific questions posed.

1. What diagnosis best fits Mr McLennan's symptoms and presentation?

This is a neurotoxic syndrome consequent upon exposure to probably glutaraldehyde within the stock wash material. The combination of cognitive, behavioural and physical symptoms matches those described in other documents including that by Glass (1997), matches other data described by others exposed to glutaraldehyde, particularly in the health industry, and also those described by others in relation to other forms of organic solvent neurotoxicity arising from a broad range of well-described compounds.

2. What is the most likely cause of these symptoms?

Glutaraldehyde, within the Stockwash product he was exposed to in his work as a shepherd at the Pukeuri Freezing Works. There is no history of exposure to any other neurotoxic compound. There is no evidence for any other form of abnormal reactivity to workplace changes, with a long history of capacity to manage hard work, long hours, and stressful environments. There is no evidence for any models of exposure to dependency seeking behaviour in his formative or later years, nor indeed any evidence for the presence of this. In the absence of such history, it would be highly unusual to present with abnormal illness behaviour or psychogenically determined symptoms at the age of fifty-two. On the basis of probability this is far more likely to be due to toxin

exposure. Similarly, there is no other evidence for any other condition present which would explain his symptoms.

3. Mr McLennan's symptoms persisted well after his exposure to Stockwash stopped. What is the best explanation for this?

The usual pattern of development of neurotoxic syndromes with exposure is that symptoms will appear in the setting where there is exposure, and for a variable period of time (except with a very large acute exposure), will settle away from that environment. Gradually over time, symptoms will become more severe over the course of exposure, and take longer to settle away from this environment, until they reach a point where even removal from the environment does not lead to settling of the symptoms. At some point, which is variable from individual to individual, the symptoms will become permanent. It is notable in Mr McLennan's case that while the history he initially provides, and that which has been focussed on by others, is on a sudden onset of symptoms in April 2008, he had in fact been developing symptoms for some months prior to this. In this regard, he was probably his own worst enemy, as, given his nature of being hardworking and wanting to do the best job possible, he had simply continued in the employment situation, with no complaint. It was not until a more severe level of symptoms broke through, and did not settle readily, that he voiced concern. Even then, his level of concern voiced was extremely limited initially, and he struggled to continue to work until the end of 2008. This is not the pattern of an individual who is avoided of work, or who is looking for excuses to become dependent. Thus, he presents with a typical pattern of chronic symptoms once he has crossed a particular threshold of symptoms being maintained with exposure over a prolonged length of time.

4. Mr McLennan has undergone patch testing and respiratory testing. Can you please comment on the usefulness of such testing in coming to a determination about glutaraldehyde poisoning?

I note that my expertise relates to the brain, and not to respiratory or dermatology conditions. Testing has shown no evidence of allergic reactivity. However, this does not preclude the development of neurotoxicity and indeed bears little relationship to this. Neurotoxicity relates to chemical effects of organic solvents on the brain and its function, and not to an allergic process, and therefore the absence of evidence of allergic reactivity in no way precludes a diagnosis of neurotoxicity.

I note that Mr McLennan has not had any specific therapeutic input for neurotoxicity. There are a number of areas where he could be assisted to maintain or develop a better quality of life. It would help him if these areas could be addressed.

[14] On 6 August 2018, the Reviewer dismissed Mr McLennan's application for review. The Reviewer concluded that Mr McLennan had not established that he had sustained any physical injury as a result of exposure to glutaraldehyde while working as a shepherd.

[15] On 9 August 2018, a Notice of Appeal was lodged. On 6 May 2021, Judge Spiller issued a judgment in which he concluded:[1]

> [48] In light of the above evidence, the Court finds that Mr McLennan suffered a personal injury as a result of his exposure to glutaraldehyde in his workplace. The Court is satisfied that Mr McLennan has presented sufficient material pointing to proof of causation on the balance of probabilities.
>
> [49] For the above reasons, the appeal is allowed, and the review decision dated 6 August 2018 is set aside. The matter is remitted for a further review to be conducted as to whether the balance of the criteria in section 30 of the Act have been satisfied.

[16] On 7 December 2021, Dr John Monigatti, Occupational Physician and Corporation clinical advisor provided a report on the significantly greater risk test contained in section 30 of the Act. Dr Monigatti wrote in part:

> Glutaraldehyde is a commercial chemical used primarily as a disinfectant and biocide. It has numerous uses in industrial, agricultural, and medical settings ...
>
> Many occupational groups are exposed to glutaraldehyde, therefore, with the risk being highest for health care workers who:
>
> - cold-sterilise instruments in endoscopy and surgical units when glutaraldehyde solution is poured into or out of the sterilizing pans;
> - work in operating rooms. dialysis departments, endoscopy units, and intensive care units where glutaraldehyde formulations are used in infection control procedures;
> - prepare the alkaline solutions or fix tissues in histology and pathology labs;
> - sterilise benchtops with glutaraldehyde solutions;
> - develop x-rays.
>
> Most of the atmospheric monitoring has been done in hospitals and dental clinics for this reason.
>
> The level of exposure to glutaraldehyde depends upon the dose, duration. and work being done. Absorption into the body occurs primarily through inhalation although dermal contact and ingestion may occur also.
>
> Occupational exposure to glutaraldehyde has often been associated with symptoms of respiratory tract irritation, particularly in medical facilities close to the sterilisation source. In occupational settings where personal or workplace air sampling was performed, self-reported respiratory tract symptoms following short-term exposures occurred at concentrations as low as 0.05 ppm.

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1 *McLennan v Accident Compensation Corporation* [2021] NZACC 73.

Giutaraldehyde irritates the nose, eyes and skin upon direct contact. Occupational exposure to glutaraldehyde has been commonly associated with nasal and ocular irritation and severe dermal irritation.

Information regarding neurological effects in workers exposed to glutaraldehyde is limited to reports of increased incidences of self-reported headaches during disinfection processes in which glutaraldehyde was used. Glutaraldehyde-induced neurotoxiclty has not been demonstrated in either humans or animals.

Numerous reports suggest that glutaraldehyde causes dermal sensitisation in occupational settings where glutaraldehyde is used as a germicide. The dermal sensitisation potential of glutaraldehyde has not been demonstrated in limited, controlled human studies but there is support from animal studies.

There is some evidence for glutaraldehyde-induced respiratory hypersensitivity in occupationally-exposed individuals. Results from single-blind placebo-controlled studies of health workers with occupational exposure to glutaraldehyde and diagnosed with glutaraldehyde-induced occupational asthma and rhinitis suggest an immunologic mechanism. Other epidemiological studies revealed no evidence of glutaraldehyde-induced respiratory sensitisation, however. There is no evidence of giutaraldehyde-induced respiratory sensitization in available animal studies.

Short-term exposure to high levels of glutaraldehyde may result in sudden headaches drowsiness, and dizziness. Breathing glutaraldehyde can irritate the nose, throat, and respiratory tract, causing coughing and wheezing. It causes strong irritation to the eyes and Ingestion may result in abdominal pains, cramps, vomiting, diarrhoea, and or a burning sensation in the chest. At very high doses. vascular collapse and coma have occurred.

Because glutaraldehyde is a sensitiser, after repeated exposures an allergic response can occur. This means that some workers will become very sensitive to glutaraldehyde and have strong reactions if they are exposed to even small amounts. They may have sudden asthma attacks with difficult breathing, wheezing, coughing, and tightness in the chest. Prolonged exposure can cause a skin allergy and chronic eczema, and afterwards, exposure to small amounts produces severe itching and skin rashes.

In summary, glutaraldehyde is recognised as being a contact irritant, dermal sensitiser and possible respiratory sensitiser. The only long-term health effects it is known to cause are skin rashes and, potentially, asthma. Any opinion that glutaraldehyde has chronic adverse health effects other than these is based on speculation, not evidence based medicine, irrespective of the dose and duration of exposure. In particular, there are no known long term cerebral poisoning effects that might constitute “neurotoxic syndrome”.

Mr McLennan had low-level exposure to Ecosafe Stockwash Plus, a spray containing glutaraldehyde and surfactant applied to sheet prior to slaughter. The symptoms he complained of, and accepted by the Court as being indicative of personal injury, were chest pain, headaches, inflamed and gummed-over eyes, sore throat, palpitations and haemoptysis. Only one, headache, could possibly be considered a neurological symptom and most headaches are not caused by neurotoxicity or indicative of physical injury.

> *1) What is the risk of a person carrying out the relevant task in the relevant work environment developing the injury concerned- i.e. neurotoxic syndrome ("x")?*
>
> There is no known risk
>
> *2) What is the risk of persons not performing that task in that environment suffering from that personal injury ("y")?*
>
> There is no known risk.
>
> *3) Is "x" significantly greater than "y"?*
>
> No.

[17] On 17 December 2021, review proceedings were held. On 13 January 2022, the Reviewer dismissed the review on the basis that there was no medical or expert evidence to counter the opinion of Dr Monigatti, and so Mr McLennan did not meet the qualifying criteria for a work-related gradual process injury. On 8 February 2022, a Notice of Appeal was lodged.

[18] On 1 April 2022, Dr Newburn provided a further report, in which he stated:

> In my report dated 31 October 2017, I described the constellation of effects suffered by Mr McLennan as a neurotoxic syndrome. I used the term "neurotoxic syndrome" to refer to the effects of glutaraldehyde poisoning. These effects were respiratory distress, headache, fatigue, a sore runny nose, blurred vision, and heart palpitations. These short-term effects of glutaraldehyde poisoning have passed, leaving a longer-term acquired sensitivity to chemicals.
>
> The effects of glutaraldehyde poisoning are well described in the literature and align with the symptoms suffered by Mr McLennan. The Department of Labour's guideline for the safe use of glutaraldehyde provides a useful summary of the effects of glutaraldehyde poisoning.
>
> In terms of the question about whether persons employed in a work environment where there is exposure to stock wash containing glutaraldehyde are at materially greater risk of being poisoned by glutaraldehyde than persons who do not work in this environment, I note that glutaraldehyde is not a naturally occurring chemical. It is an industrially produced compound and its use as a disinfectant is generally limited to commercial and medical applications. Glutaraldehyde poisoning is suffered only by those who come into contact with it, usually workers applying a disinfecting product that contains glutaraldehyde as an active agent.
>
> Glutaraldehyde is an effective sterilising agent because it is very poisonous. Even when used at recommended levels there is a risk that some workers will have an adverse reaction to it. Often there is variation in the concentration of glutaraldehyde that workers are exposed to, as likely occurred in this case.

In short, the risk of glutaraldehyde poisoning is significantly greater for workers employed in an environment where there is exposure to glutaraldehyde than for persons who do not work in such an environment. This is simply because glutaraldehyde is not a naturally occurring chemical or a common household substance. Workers exposed to glutaraldehyde have some risk of being poisoned while persons not exposed to glutaraldehyde have zero risk of being poisoned.

[19] On 25 August 2022, Dr Monigatti provided a further report and stated:

Mr McLennan's advocate has an unusual interpretation of the "significance of risk" test. It is not a comparison of the risks between specific working groups and the "general public". Years ago, John Miller Law argued successfully in the District Court that the comparison was between workers performing a particular task or working in a particular environment than workers who were not. This was because certain disorders such as carpal tunnel syndrome and hip osteoarthrosis were so strongly associated with age that if other workers and non-workers alike were lumped together, the incidence and prevalence of these disorders in the elderly non-working population would be so great as to swamp any cases in certain workers that were truly attributable to the work – sometimes causing the third step not to be met when it should have been. Since that judgement, ACC has compared the working group of interest with other groups performing dissimilar work, which negates the age factor and allows a true comparison of relative risk to be made.

Even if such were not the case, the advocate's "general public" would include many workers who use glutaraldehyde when performing different tasks in different working environments. In my last memorandum I advised that glutaraldehyde has numerous uses in industrial, agricultural, and medical settings. It is ridiculous to hold that the mere presence of glutaraldehyde defines the working environment in the way the advocate suggests, given that most processes in which it is used are very different from stock wash application and that a myriad of other factors – some common and some not – make up the environment. The stipulation to Dr Newburn that the substance had to be a naturally occurring one that everyone is exposed to is as fatuous as calling "glutaraldehyde poisoning" a personal injury (i.e. physical) without identifying any bodily harm or tissue damage. In contrast, neurotoxic injury (meaning brain poisoning) does constitute a personal injury because it specifies a target organ.

In my previous comment I stated that glutaraldehyde is a well-recognised irritant of the nose, eyes and skin upon direct contact, and that occupational exposure to glutaraldehyde had been commonly associated with nasal and ocular irritation and severe dermal irritation. Glutaraldehyde is also a is a sensitiser that can causes asthma and allergic contact dermatitis. Information regarding neurological effects in workers exposed to glutaraldehyde is limited to reports of increased incidences of self-reported headaches during disinfection processes in which glutaraldehyde was used, however, with glutaraldehyde-induced neurotoxicity having been demonstrated in neither humans nor animals. So, whether "those who do not perform that employment task or are employed in that environment" refers to other workers or other workers plus non-workers, there is no evidence that people employed as Mr McLennan was are at significantly greater risk than anyone else of suffering a brain injury from work involving exposure to glutaraldehyde.

In answer to your questions:

1. What injurious effects were suffered by Mr McLennan because of glutaraldehyde poisoning?

The medical specialists with recognised expertise in toxicology (which excludes Dr Newburn) who interviewed and examined Mr McLennan or reviewed the file were unsure. Glutaraldehyde is a pungent substance. Chemicals that trigger odours may cause health effects ranging from mild discomfort to multi-symptomatic incapacity. Those with strong odours that cause eye, nose, throat or lung irritation may cause some people to feel a burning sensation that leads to coughing, wheezing or other breathing problems. Others may get headaches or feel dizzy or nauseous. Some people develop physiological effects from odour even when their exposure is much lower than that typically required to cause direct health effects, owing to the perception that if there is a strong smell it must be doing physical harm.

Mr McLennan's symptoms were not those of respiratory or mucous membrane inflammation, which suggests that the concentration of glutaraldehyde fumes was below the irritant threshold. He had a range of non-specific symptoms after exposure to a pungent substance at levels measured as being lower than are known to cause harm in humans. As there appears to have been a temporal link I can only postulate that Mr McLennan had a peculiar sensitivity to the biocide which caused him to react symptomatically in the way that he did. I cannot be certain whether this response was physiological or behavioural but given that the clinicians were unable to find any evidence of the conditions that glutaraldehyde is known to cause, I can only conclude that there may have been physiological symptoms of relatively short duration but beyond that the response was and remains behavioural.

Judge Spiller, in finding that Mr McLennan had suffered a personal injury as a result of his exposure to glutaraldehyde in his workplace, may have thought the same. He did not specify a neurotoxic injury.

2. Are persons employed in a work environment where there is exposure to stock wash containing glutaraldehyde at significantly greater risk of being poisoned by glutaraldehyde than persons who do not work in this environment?

No, as advised previously. Dr Newburn furnished no objective evidence to the contrary, only opinion.

Relevant law

[20] Section 30(2) of the Accident Compensation Act 2001 sets out the circumstances in which gradual process cover will be granted:

> **30 Personal injury caused by work-related gradual process, disease, or infection**
>
> (2) The circumstances are -
>
> (a) the person -

(i) performs an employment task that has a particular property or characteristic; or
(ii) is employed in an environment that has a particular property or characteristic; and

(b) the particular property or characteristic -
(i) causes, or contributes to cause of, the personal injury; and
(ii) is not found to any material extent in the nonemployment activities or environment of the person; and
(iii) may or may not be present throughout the whole of the person's employment; and

(c) the risk of suffering the personal injury-
(i) is significantly greater for persons who perform the employment task than for persons who do not perform it; or
(ii) is significantly greater for persons who are employed in that type of environment than for persons who are not.

[21] In *Knox*,[2] Young J stated:

> [23] Section 7 (1)(c) requires the decision-maker to make three assessments. The first is to assess the risk of a person carrying out the relevant work task in them relevant work environment developing the injury concerned, say x. The second step is to assess the risk persons who do not perform that task in that environment have of suffering from that personal injury, say y. The third step is to decide whether x is "significantly greater" than y. If it is, s 7 (1)(c) is satisfied. If not, then a claim for cover must fail.

[22] In *Hunter*,[3] Cadenhead DCJ stated:

> …
>
> [d] The risk of suffering that personal injury is significantly greater for persons performing that employment task in that environment than for persons who do not perform that task in that environment. The comparison of risk of suffering that personal injury performing that employment task means that the individual injury and employment task has to be considered against the risk of injury to persons who do not perform that task in that environment. The use of the word "persons" means that the specific employment task and injury has to be considered on an objective basis for the purpose of comparison. In considering the test in this subsection it is to be noted that whereas the tests in the first two subsections are particular to the claimant, the third test is general, the subsection referring to "persons" ... It is the comparison of that type of risk of injury with the risk of injury by people, who do not perform tasks involving those characteristics. This comparison may involve consideration of medical evidence along with the application of judicial impression. At the end of the day it should be resolved by relatively simple analysis of all the facts in the case. …

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2 *Knox v Accident Rehabilitation and Compensation Insurance Corporation* (HC) [2000] NZAR 609.

3 *Hunter v Accident Compensation Corporation* [2007] NZACC 261 at [37]. See also *Cullen v Accident Compensation Corporation* [2005] NZACC 40, at [16].

[23] In *Mehrtens*,[4] Judge Ongley noted:

> [48] … In relation to the medical evidence, particularly in an area where an opinion is relied upon, the Court will be influenced by the extent to which the medical opinion proceeds logically from as clear or settled a basis of fact as is possible (including the possible need for caution when significant reliance is based on a claimant's self report); appropriate analysis of that material including, where necessary, the presentation of a differential diagnosis; an appropriate level of regard for and consideration of medical research and studies bearing on the issue at hand applied to the particular facts of the case; and a logically reasoned conclusion which takes account of any differing views or factors which might contra indicate the opinion being presented. In this respect, an opinion which is seen to absorb and respond to matters (whether matters of fact or opinion) which challenge the view offered will often be regarded as more persuasive.

[24] In *MacMillan*,[5] Judge Powell stated:

> [34] … the Evidence Act remains the framework within which all evidence is admitted and considered, and if an issue with particular evidence is raised it can be tested in a conventional manner. Section 128 of the Evidence Act therefore sets out the starting point for what fads can be subject of judicial notice, and while s 156(1) does allow me to go wider than the Evidence Act there must be a good reason to do so.

Discussion

[25] For Mr McLennan to qualify for cover for a work-related gradual process injury, he needs to meet three requirements. First, he needs to perform an employment task, or be employed in an environment, that has a particular property or characteristic. Second, the particular property or characteristic of his work must cause, or contribute to the cause of, his personal injury, and not be found to any material extent in his non-employment activities or environment. Third, his risk of suffering his personal injury must be significantly greater for persons who perform his employment task, in his type of environment, than for persons who do not.

[26] This Court has found that Mr McLennan meets the first requirement for cover in that he suffered a personal injury as a result of his exposure to glutaraldehyde in his workplace. It is accepted by the respondents that Mr McLennan meets the second requirement for cover in that he did not have exposure to glutaraldehyde in his non-work activities. The issue at appeal is whether Mr McLennan meets the

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4 *Accident Compensation Corporation v Mehrtens* [2012] NZACC 250.
5 *MacMillan v Accident Compensation Corporation* [2014] NZACC 154.

third requirement for cover, that persons exposed to glutaraldehyde in stock wash have a significantly greater risk of suffering from glutaraldehyde poisoning than persons who are not exposed to the glutaraldehyde in stock wash. This comparison involves consideration of medical evidence along with the application of judicial impression and should be resolved by analysis of all the facts in the case.[6]

[27] The Corporation and AGL submit as follows. The evidence of Dr Newburn is not admissible, because he has no expertise in toxicology, which is the area of expertise required for expert opinion evidence to be helpful to the Court, given the issue before it. In contrast, Dr Monigatti is registered with the Medical Council as an Occupational Physician. Further, the evidence of Dr Monigatti should be preferred in that his analysis engages more appropriately and directly with the actual test to be applied by the Court. The weight of Dr Newburn's evidence (if it is admissible), being an opinion misdirected to the wrong question/issue, must be much reduced.

[28] This Court acknowledges the above submissions. However, the Court refers to the following considerations.

[29] First, section 156(1) of the Act provides that the court may hear any evidence that it thinks fit, whether or not the evidence would be otherwise admissible in a court of law. This Court acknowledges that normally the Court would require expert evidence of a medical practitioner qualified in the field of toxic disease conditions.[7] However, this Court finds that Dr Newburn's evidence is admissible and entitled to weight by virtue of his medical qualifications (including MB ChB), because his analysis is consistent with relevant medical literature and guidelines, and because of his ongoing close knowledge of Mr McLennan's working environment and health symptoms.

[30] Second, this Court is mindful that it has found that Mr McLachlan suffered a personal injury as a result of his exposure to glutaraldehyde in his workplace. In

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6 *Hunter*, above n 3, at [37].

7 *Green v Accident Compensation Corporation* [2012] NZACC 272, at [16]. See also *Shirkey v Accident Compensation Corporation* [2017] NZACC 106 at [37], as to appropriately qualified experts.

making this finding, the Court repeatedly noted in its the reasons that Mr McLachlan suffered a personal injury as a result of his "exposure to glutaraldehyde" in his workplace, rather than "neurotoxic syndrome". In any event, Dr Newburn stated in his report that he used the term "neurotoxic syndrome" to refer to the effects of glutaraldehyde poisoning. This Court is satisfied that Dr Newburn addressed the correct issue in point.

[31] Third, the opinion of Dr Newburn is that the risk of glutaraldehyde poisoning is significantly greater for workers employed in an environment where there is exposure to glutaraldehyde than for persons who do not work in such an environment. Dr Newburn noted that:

(a) the effects of glutaraldehyde poisoning are well described in the literature and align with the symptoms suffered by Mr McLennan, and the Department of Labour's guideline for the safe use of glutaraldehyde provided a useful summary of the effects of glutaraldehyde poisoning;

(b) glutaraldehyde is not a naturally occurring chemical, it is very poisonous, and, even when used at recommended levels, there is a risk that some workers will have an adverse reaction to it;

(c) glutaraldehyde poisoning is suffered only by those who come into contact with it, usually workers applying a disinfecting product that contains glutaraldehyde as an active agent;

(d) workers exposed to glutaraldehyde have some risk of being poisoned while persons not exposed to glutaraldehyde have zero risk of being poisoned.

[32] This Court finds that Dr Newburn's medical opinion proceeds logically from as clear or settled a basis of fact as is possible; provides an appropriate analysis of that factual material; shows an appropriate level of regard for and consideration of medical research and studies bearing on the issue at hand; and comes to a logically reasoned conclusion.

Conclusion

[33] In light of the above considerations, this Court finds that persons exposed to glutaraldehyde in stock wash have a significantly greater risk of suffering from glutaraldehyde poisoning than persons who are not exposed to the glutaraldehyde in stock wash. This finding has been reached after consideration of medical evidence along with the application of judicial impression based on the facts in this case.

[34] The Court therefore finds that Mr McLennan qualifies for cover for a work-related gradual process injury. This appeal is allowed, and the review decision dated 13 January 2022 is set aside.

[35] Mr McLennan is entitled to costs. If these cannot be agreed within one month, I shall determine the issue following the filing of memoranda.

P R Spiller
District Court Judge

Solicitors: Schmidt & Peart Law for the Appellant
Young Hunter Solicitors for the First Respondent