GOOD PRACTICE GUIDELINES

Exposure monitoring and health monitoring

GUIDANCE FOR BUSINESSES

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Te Kāwanatanga o Aotearoa
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WORKSAFE
Mahi Haumaru Aotearoa

Good practice guidance for businesses setting up exposure monitoring and health monitoring at work.

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Exposure monitoring and health monitoring

KEY POINTS

- A risk assessment of the workplace, workforce, health hazards, existing control measures and previous monitoring data can help inform an exposure monitoring or health monitoring programme.
- Exposure monitoring and health monitoring – along with verifying that control measures are working effectively – can be used to manage health risks.
- Monitoring should be carried out by people with appropriate knowledge, skills, training and experience.

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1.0 Introduction

IN THIS SECTION:

This guidance provides advice for PCBUs on exposure monitoring and health monitoring.

1.1 What is this guidance about?

Working in hazardous work conditions can adversely affect workers' health – in both the short and long term. This includes when the work involves substances that are harmful to people's health (substances hazardous to health).

As a person conducting a business or undertaking (PCBU)[1] you must ensure, so far as is reasonably practicable, the health and safety of workers, and that other persons are not put at risk by your work. This is your primary duty.

You must manage the health risks to workers and others that arise from being exposed to the work carried out by your business. In some circumstances, this could mean monitoring worker exposure (exposure monitoring) and monitoring the health of workers (health monitoring).

This guidance covers both exposure monitoring and health monitoring. It provides good practice advice for businesses on selecting external monitoring providers and then on putting in place monitoring programmes. Businesses with in-house monitoring providers may also find aspects of this guidance useful.

This guidance:

- explains what exposure monitoring and health monitoring are
- explains how exposure monitoring and health monitoring are used in managing health risks
- explains when to monitor
- describes what to think about when getting monitoring programmes underway
- explains next steps once decisions have been made.

Also available is the following guidance:

- What to know about exposure monitoring and health monitoring – for small businesses
- What to know about exposure monitoring and health monitoring – for workers

[1] In this guide 'business' means the person conducting a business or undertaking (PCBU). An undertaking is usually not-for-profit or non-commercial (for example, council, school, charity). This guidance covers businesses and other PCBU organisations. For more information about PCBUs and worker duties, see Appendix 2.

2.0 What is exposure monitoring and health monitoring?

IN THIS SECTION:

Exposure monitoring and health monitoring can be used in the effective management of work health risks.

2.1 What is the difference between exposure monitoring and health monitoring?

Exposure monitoring measures and evaluates what your workers are being exposed to while they are at work.

Health monitoring looks at whether a worker's health is being harmed because of what they are being exposed to while they are at work.

Figure 1 explains what exposure monitoring and health monitoring are.

2.2 How can monitoring be used in the effective management of health risks?

Exposure monitoring can be used to:

- identify, assess and confirm health risks
- identify where new control measures are needed
- monitor how well current control measures are performing, and
- identify when control measures need to be reviewed, updated or removed.

Health monitoring can be used to tell you if workers are experiencing health effects from potential exposures. Health monitoring can also confirm that control measures are preventing harm.

Monitoring is not a control measure. It does not replace the need for control measures to eliminate or minimise worker exposure to harm.

What is the difference between exposure monitoring and health monitoring?

Exposure monitoring

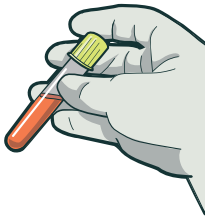
Exposure monitoring measures and evaluates what your workers are being exposed to while they are at work.

This can involve workers wearing a device while they work. Examples of personal exposure monitoring:

- measuring the level of noise workers are being exposed to
- measuring the amount of a substance hazardous to health that workers are being exposed to
- measuring the amount of vibration workers' arms, hands or whole body are being exposed to.

It should be carried out by suitably qualified, trained and experienced people who know how to carry out the monitoring you need (such as Occupational Hygienists).

Biological exposure monitoring is another type of exposure monitoring. It usually involves taking blood or urine samples to test for a substance (or a metabolite of a substance) workers are working with.

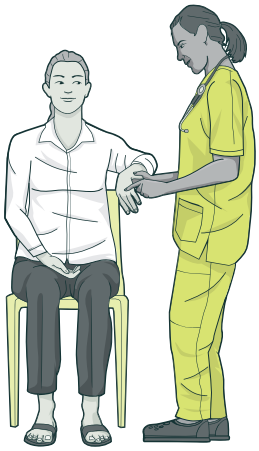


Blood or other invasive samples must be taken by a health practitioner such as an Occupational Health Nurse or phlebotomist (for blood).

A suitably qualified, trained and experienced person is needed to interpret the results.

Health monitoring

Health monitoring looks at whether a worker's health is being harmed because of what they are being exposed to while they are at work.



Examples:

- carrying out hearing tests to check for hearing loss from being exposed to noise
- checking for skin damage from being exposed to a substance hazardous to health
- checking for nerve, muscle or circulation damage from being exposed to vibration.

Well-being programmes, employment prescreening and fitness-to-work examinations are **not** health monitoring.

Monitoring should be carried out at the beginning of a worker's employment (to get baseline readings). Then regular (ongoing) monitoring should be carried out.

It should be carried out by suitably qualified, trained and experienced health practitioners with the knowledge, skills, training and experience to carry out the monitoring you need.

For example, an Occupational Health Nurse could carry out initial health assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician or GP with relevant experience.

FIGURE 1: Exposure monitoring and health monitoring

As shown in Figure 2, monitoring information – along with verifying that your control measures are working effectively – can be used to continually improve how you are managing health risks.

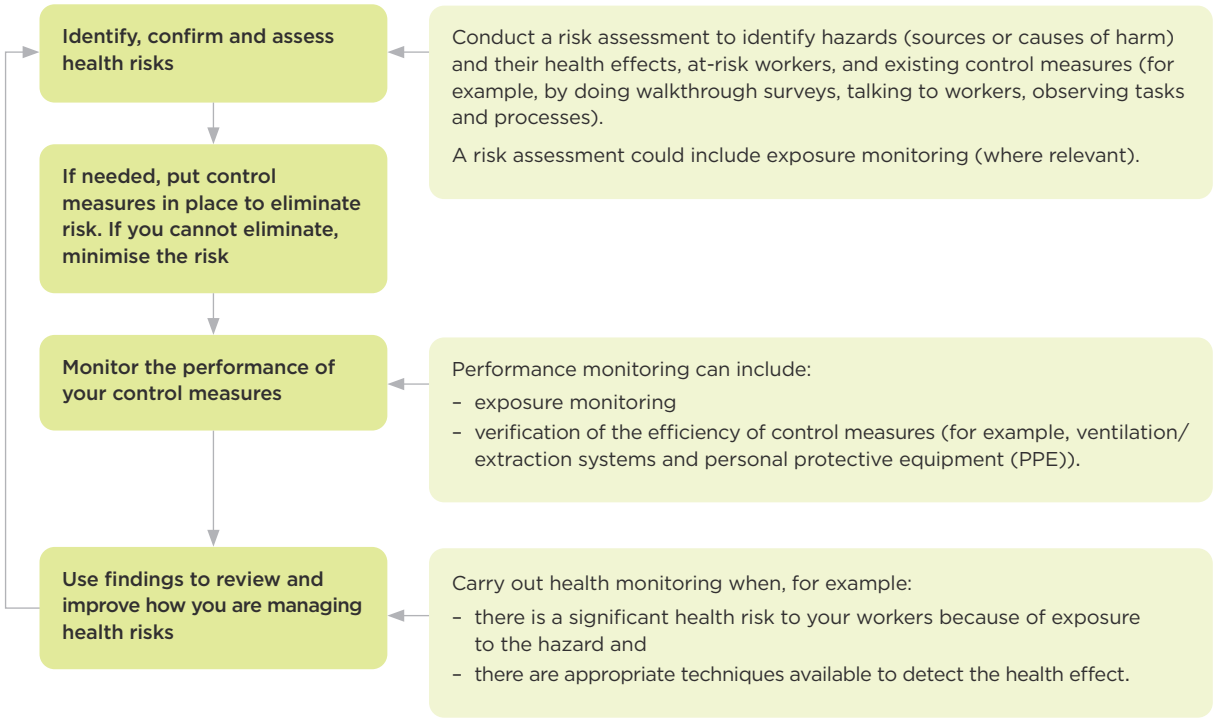


FIGURE 2: Role of monitoring when managing health risk

For more information about managing risk, see our guidance:
Identifying, assessing and managing work risks

You could need initial monitoring carried out, and then regular (ongoing) monitoring.

You should pay for monitoring costs. Costs could include transport costs if the monitoring occurs off-site.

If monitoring results show your workers are being harmed or are at risk, take immediate action to eliminate or minimise the health risks to workers. This should include carrying out an investigation, reviewing control measures and deciding what actions you will take (Section 4.8).

EXAMPLE

Joe runs a workshop with many noisy machines. Joe knew that loud machine noise could permanently damage hearing. Joe also knew that while his workers were likely to be exposed to loud music outside of work, he still had a duty to manage health risks arising from noise at work.

Assess the health risk

When Joe and his workers carried out a risk assessment, noise was identified as a potential source of harm to workers. As an interim measure, workers were given hearing protection.

Joe considered whether he needed to bring in a health and safety professional to check the levels of noise. He decided that someone with the right skills and experience was needed to accurately measure the noise his workers were being exposed to.

An Occupational Hygienist came in to check what noise workers were being exposed to throughout the workshop. Their noise levels were higher than the exposure limit of 85 dB(A), as an 8-hour time-weighted average. This meant Joe's workers were at enhanced risk of developing noise induced hearing loss unless he did something about it.

Put control measures in place to eliminate or minimise the risk

Joe took immediate action. He read WorkSafe's noise toolbox and followed a good practice risk management process:

- Where Joe could, he replaced machinery with quieter machines.
- Where Joe could not replace a machine, he installed noise barriers and moved the machine to a separate room to reduce the amount of noise the workers were exposed to.
- Where he could, Joe fitted silencers on compressor exhausts to reduce the noise.
- Joe ensured all workers knew about the health risks of excessive noise. He rotated jobs to reduce the number of workers exposed to machine noise and reduced the time workers were exposed to excessive noise.
- However, even with the control measures in place, workers were still exposed to unsafe noise levels inside the machine room. So based on the recommendation from the Occupational Hygienist, Class 3 earmuffs were provided to be worn in the machine room. Workers understood why they needed to wear the earmuffs. The earmuffs were fit tested to each worker. Workers were trained to correctly wear, maintain and store the earmuffs. Joe regularly checked that workers were using them properly.

Monitor the performance of control measures

Joe then periodically reviewed the control measures.

Joe wanted to check that the control measures were working well to protect workers from noise. To check the control measures were continuing to work effectively:

- Joe organised the Occupational Hygienist to regularly re-check the noise all workers were being exposed to.
- Joe also decided that it was reasonably practicable and good risk management for workers to undergo regular hearing tests. He engaged an occupational health provider who recommended yearly testing.

As part of Joe's approach to continuously improve the control measures, he planned to remove the need for hearing protection in the machine room as soon as he could.

As the first step, Joe planned to replace the noisy machinery with much quieter versions that had recently come onto the market. Following this, Joe would work with the Occupational Hygienist to decide on what other measures were needed so that workers did not need to wear hearing protection inside the machine room.

Use monitoring findings to improve how health risks are being managed

If the monitoring results showed that his workers were being exposed to unsafe noise levels, Joe would review and improve the control measures after seeking advice from the Occupational Hygienist.

What Joe did when there was a change in the work

Joe knew that in a few months there will be a big order which would mean extended shifts (longer than eight hours) for three months. Joe knew that when workers are exposed to noise for greater than eight hours, the levels of allowable noise decreased. So Joe checked whether the Class 3 earmuffs currently worn by workers would provide adequate hearing protection over the extended shifts.

When Joe found out they would not, he knew he had to provide his workers with increased hearing protection. He also reassessed his noise management plan to check that it was still appropriate under the changed work conditions, and if there were other control measures he could put in place.

3.0 When must you monitor worker exposure or worker health?

IN THIS SECTION:

There are monitoring requirements under the Health and Safety at Work Act 2015.

3.1 Monitoring as part of your primary duty under HSWA

You must ensure, so far as is reasonably practicable, the health and safety of workers, and that other people are not put at risk by your work. In some circumstances, this could mean monitoring worker exposure and the health of workers.[2]

Think about:

- What are the risks involved with the work being undertaken?
- Have you identified hazards and risks with your workers' input?
- Have you taken into account health issues that have occurred in the past at your business?
- Have workers raised concerns or made complaints regarding hazards or risks?
- How certain are you that your workers are not being exposed to hazards at potentially harmful levels?
- How certain are you that your control measures are minimising worker exposure to an acceptable level?
- Have you carried out a risk assessment of the health risks? This risk assessment can help determine if exposure monitoring or health monitoring is required (see below).

How can you carry out a risk assessment of the health risks?

A risk assessment of health risks includes the identification of health hazards, assessing the health consequences against the likelihood of exposure, and looking at existing control measures.

To determine if monitoring of worker exposure or worker health is required, a thorough risk assessment should be carried out of:

- the workplace
- workforce
- health hazards
- existing control measures
- previous monitoring data (if available) and
- health issues that have occurred in the past.

[2] Section 36(3)(g) of HSWA.

Carrying out a risk assessment helps to identify which workers or groups of workers need monitoring, and for which health hazards or health effects monitoring should be carried out.

Think about:

- What chemical, physical, or biological hazards are present? In what quantities?
- What are the health effects associated with exposure to these health hazards?
- What workplace exposure standards (WES), biological exposure indices (BEI) or other occupational exposure limits are there for these health hazards?
- How is the workforce organised in terms of worker groups, tasks, work area, and number of workers?
- What are the processes, tasks, or work practices that are sources of exposure and how workers may be exposed?
- What materials are involved and how could the raw products, by-products, waste products, or end products affect workers?
- What existing control measures are there? Are they used and maintained properly?

Ask yourself:

- Where can I obtain information from?
- What can workers tell me about their tasks?
- Am I confident that I am getting all the information I need?
- Do I need to engage with an expert on health risk assessment?

Monitoring should be considered when the risk assessment indicates workers have an unacceptable or unknown health risk level.

You may consult a competent person in health risk assessment such as an Occupational Hygienist (see Section 4.3).

Ask yourself:

- Could monitoring help you identify, assess or confirm health risks?
- Could monitoring tell you how well your control measures are working?
- Is it reasonably practicable to monitor worker exposure and/or worker health? (see Appendix 3 for an explanation of what 'so far as is reasonably practicable' means)
- Have your workers requested monitoring to be carried out?
- Does WorkSafe have guidance on when to monitor for your work activity or risk?

Monitoring should be considered when:

- you are not certain whether exposure levels exceed safe levels, and
- there is a link between exposure to the hazard and harm to workers, and
- there are tests available to inform the level of exposure, the presence of the substance or to check for health changes.

You will need to talk to a suitably qualified, trained and experienced health and safety professional to confirm if monitoring is appropriate for you (and if so, what type) (see Section 4.3).

3.2 Monitoring required by Health and Safety at Work (HSW) Regulations

You may be required to monitor in circumstances specified in Regulations.

An example is the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 (the GRWM Regulations). Table 1 explains when you must monitor under the these Regulations.

	MONITORING UNDER THE GRWM REGULATIONS
When?	The GRWM Regulations tell you specific circumstances when you must carry out monitoring: – You must carry out exposure monitoring if your work involves substances hazardous to health, and you are not certain whether its concentration exceeds its prescribed exposure standard. – You must carry out health monitoring if your work involves a substance hazardous to health that is specified in a safe work instrument (SWI) as requiring health monitoring, and there is a serious risk to worker health from exposure to that substance. See Appendix 6 for information about prescribed exposure standards and SWIs.

TABLE 1:
Monitoring under the GRWM Regulations

See Appendix 6 for all the HSW Regulations that require monitoring.

If you are monitoring as required by the GRWM Regulations, or other HSW Regulations, you must follow those requirements.

If you do not need to monitor under these Regulations, see the previous section about monitoring as part of your primary duty.

WorkSafe could request you carry out monitoring to meet your primary duty or HSW Regulation requirements

You could be required to carry out monitoring:

- when one of our Inspectors has told you (or told the person who appears to be in charge of the workplace) to ensure monitoring is carried out. In some cases an improvement notice may be issued
- when a WorkSafe-appointed health and safety medical practitioner requires workers to be medically examined or biological samples to be taken (this can happen if they are satisfied the worker has been exposed to a significant work hazard).

4.0
What should you think about when getting exposure monitoring and health monitoring underway?

IN THIS SECTION:

With input from workers, decide what the monitoring will involve.

4.1 Things to be aware of first

You must work with other businesses you share monitoring duties with

You must, so far as is reasonably practicable, consult, cooperate and coordinate activities with all other businesses you share health and safety duties with in relation to the same matter. This is so all businesses can meet their joint responsibilities.

At times, you and another business may need to monitor the same person's exposure or health (this could happen when you share a workplace or you are in a contracting chain). If this happens, talk with the other business and decide who will organise the monitoring, how information will be shared, and how costs will be split.

EXAMPLE

We Build It Tough Ltd hired casual workers from the labour hire company *The Very Best Labour Hire Ltd* for an extended period. The workers carried out work that meant monitoring should be carried out to manage health risks to the workers.

We Build It Tough Ltd and *The Very Best Labour Hire Ltd* came to an agreement about who should organise the exposure monitoring and pay for it.

It was decided that as *The Very Best Labour Hire Ltd* had an ongoing relationship with the workers, it would:

- coordinate the monitoring
- make sure that workers received the monitoring results
- make sure any remedial recommendations were actioned
- keep records.

It was agreed that *The Very Best Labour Hire Ltd* would pay 75% of the monitoring costs, with *We Build It Tough Ltd* paying the rest.

For more information on shared duties, see Appendix 4.

You must engage with your workers when making decisions about monitoring

You must engage with workers and their representatives when making decisions about procedures for exposure monitoring and health monitoring, such as:

- what the monitoring will involve
- how the monitoring results will be used, stored and shared.

You must take your workers' views into account, and tell them what decision has been made in a timely manner.

For more information on worker engagement, participation and representation, see Appendix 5.

You must keep any personal information collected during monitoring secure and confidential, and use for the purposes it has been collected for

If you are **collecting, storing, using or disclosing personal information** (this is any information about an identifiable person), you must comply with the requirements of the Privacy Act 2020.

The Privacy Act covers:

- collecting personal information
- storing personal information
- restrictions on using and disclosing personal information
- the right to access and to correct personal information
- using unique identifiers.

SOME POINTS TO NOTE

1. **Use personal information for the purposes it has been collected for**

   This means using personal information that has been collected during monitoring to manage health risks for that purpose.

   There are a few exceptions under the Privacy Act to this. For example, worker consent could be sought to use it for other purposes (for example, for research). This could be at the same time workers are asked to consent to take part in the monitoring, or later on if and when required.

2. **Take care when sharing a worker's personal information with others (for example, with other workers or businesses that you share health and safety duties with)**

   You can only share personal information when one of the relevant exceptions under the Privacy Act applies, for example:

   - when the worker has provided written consent for their personal information to be shared
   - when the reason the personal information was collected for was for it to be shared, and this was told to the worker at the time the information was collected
   - when information which could identify the worker (identifiable information) has been removed.

WHAT IS IDENTIFIABLE INFORMATION?

Apart from the obvious identifiable information (for example, name, age), other information could be used to identify individuals (for example, the worker's position, date of monitoring).

The fewer workers that undergo monitoring, the easier it will be to identify someone's information.

Even if one of the exceptions applies, it is best practice to let workers know before the information is released.

Decide with workers how any personal information collected will be shared. This information should form part of the information you provide workers (see Appendices 9–11 for examples).

3. Store personal information securely and restrict access

Any personal information collected during monitoring must be stored securely.

Think about the best way to store personal information so that only authorised personnel can access it. For example, store hardcopies in a locked drawer or room, or store electronic records on secure devices or computers that are password protected. Keep monitoring results separately from worker records.

Authorised people must know how to handle confidential and sensitive information.

Decide with workers how any personal information collected will be stored by the monitoring provider and within the business, and which people within the business will be authorised to access it. This information should form part of the information you provide workers (see Appendices 9–11 for examples).

For more information about dealing with personal information: The Privacy Act principles

Health practitioners have their own rules for dealing with health information. For more information: Health Information Privacy Code

4.2 Overview of what to consider when making decisions about monitoring

Figure 3 summarises what to consider when making decisions about monitoring and where advice can be found in the guidance.

With your workers, discuss how you will select the monitoring provider (Section 4.3).

Then with your appointed monitoring provider and workers, discuss:

- what the monitoring will involve (Section 4.4):
  - what kind of monitoring is required – what is involved, and when, where and how often it will take place
  - which workers take part
  - who your key contact will be with the monitoring provider
- what information about the workers will be given to the monitoring provider (Section 4.5)
- what the reports will contain (Section 4.6)
- how you will share monitoring findings (Section 4.7)
- what you will do if monitoring results show workers are being harmed or at risk (Section 4.8)
- how you will regularly report back to all workers and others on how well you are managing all your health risks (Section 4.9).

Once the decisions have been made about what the monitoring will involve:

- put in place information and training for workers (Section 5.1)
- put in place policies and processes you need and regularly check how well they are going (Section 5.2).

FIGURE 3: Overview of points to consider when making decisions about monitoring

4.3 Who should carry out the monitoring?

You will need a monitoring provider (the business who will carry out the monitoring) that has suitably qualified, trained and experienced health and safety professional(s) to provide advice and to carry out the monitoring including interpretation of results.

The type of monitoring and monitoring provider depends on your work. Appendix 7 shows examples of common types of exposure monitoring and health monitoring, and who carries it out.

You will first need to talk to a suitable health and safety professional to confirm if monitoring is appropriate for you (and if so, what type) – but the information in Appendix 7 will help you to work out where to start.

You may need different expertise at different stages of the monitoring/risk management process.

EXAMPLE

- an Occupational Hygienist to carry out a health risk assessment (or basic characterisation) to determine what exposure monitoring is needed (if any) and evaluating risks to worker health
- an Occupational Health Nurse to carry out health screening of workers to identify potential health changes
- a suitably qualified and experienced health practitioner to carry out a medical assessment/formal diagnosis of workers identified above, and report back to the worker and PCBU. This could be an Occupational Physician or GP with relevant experience
- a relevant health and safety professional to advise on new control measures or improving existing control measures.

What should you look for in a monitoring provider?

You should talk with your workers when selecting your monitoring provider(s).

Select a monitoring provider with health and safety professional(s) that:

- have the right knowledge, skills, training and experience in carrying out the type of monitoring you need,
- can interpret results, and
- can readily communicate to you what the monitoring results mean.

To find businesses that provide monitoring services, you could look in the following places:

- HASANZ has a register of verified health and safety professionals: https://register.hasanz.org.nz
- For Occupational Hygienists – look for consultants listed as Full Members on the Member directory of the New Zealand Occupational Hygiene Society website: www.nzohs.org.nz
- For occupational health practitioners:
  - Occupational Health Nurses – New Zealand Occupational Health Nurses' Association website: www.nzohna.org.nz
  - Occupational Physicians:
    - Australian and New Zealand Society of Occupational Medicine Inc website: https://anzsom.org.nz
    - the Australasian Faculty of Occupational and Environment Medicine (AFOEM) website: www.racp.edu.au

Table 2 outlines the questions you could ask the monitoring provider.

FIND OUT	QUESTIONS YOU COULD ASK
Do their health and safety professionals have knowledge, skills, training and experience in the type of monitoring you need? **Do they belong to a professional association?** **Do they have the right equipment that has been calibrated?** **Note**: professional associations promote continuing learning and up-skilling of members.	– Do their health and safety professional(s) hold the right qualifications or have undergone training? What association(s) do they belong to? See Appendix 8 for examples of selected monitoring provider qualifications. – For how long have they carried out this type of monitoring? – If they are not experienced, will they be supervised? What are the qualifications of the supervisor? – Can they provide references from former or current clients? – Are they listed as consultants in the area of interest on the HASANZ Register?
Can the monitoring provider provide the services you need?	– What information do they need from you? (Does this indicate they understand what you need?) – How have they determined which health hazards or health effects monitoring should be carried out for? – What kind and frequency of monitoring do they recommend? How many samples will need to be taken? What are the costs? – For exposure monitoring – how will they establish that the results will be truly representative of worker exposure? – What standards or methodology do they follow? – How will they determine the level of risk of exposure to workers? – Where will the monitoring take place (do they come to you or will workers need to travel)? – Can they readily re-book appointment times for absent workers? – Can they provide you a clear recommendation for next steps including remedial action (for example, more training, suggested improvements to control measures, PPE) and further testing? – Can they provide medical referrals if appropriate and needed? Do they have links to health practitioners that may be required if there are problems (for example, to Occupational Physicians or GPs with relevant experience)? – How will they keep personal information confidential and secure? If the monitoring provider will need to travel a long distance to your location, you could try to share travel costs with nearby businesses that also need monitoring services.
Can they provide easily understandable reports with clear recommendations of what you need to do? **Can they explain the results to workers in a way they can understand?**	– Can they show you an example of a report? – Can they provide you a high-level summary of all your workers' results so you can identify trends? – Do they provide electronic or hard-copy reports? – Where appropriate (for example, for health monitoring), can they allow sufficient time to discuss with each worker: - their results - the recommended control measures including using PPE - when referrals are needed?

TABLE 2: Questions to ask monitoring providers

As a PCBU, monitoring providers have their own duty to ensure, so far as is reasonably practicable, the health and safety of workers, and that other persons are not put at risk by its work (the monitoring they carry out and the advice they provide). Monitoring providers' actions should not introduce new work risks.

Choose your monitoring provider carefully.

However if you intend to change your monitoring provider, discuss this with your workers. We strongly recommend giving the new provider a copy of previous relevant monitoring results (see Section 4.7).

4.4 What should the monitoring involve?

You, your monitoring provider and workers should discuss why monitoring is needed, and how it will benefit workers.

What kind of monitoring is required? When, where and how often will it take place?

Your monitoring provider should advise on the appropriate type of monitoring, and when, where and how often the monitoring should occur. Appendix 7 shows examples of common types of exposure monitoring and health monitoring.

This advice will be based on information like:

- the type of work carried out (including how long workers are being exposed to the hazardous work condition)
- previous monitoring history
- the level of risk of harm (see Section 4.5).

You, your monitoring provider and workers should together discuss what the monitoring will involve. Figure 4 describes points to consider for when, where and how often monitoring will take place.

EXPOSURE MONITORING (non-biological exposure monitoring)

- Your monitoring provider should characterise the risk of work health hazards to prioritise which workers need monitoring and for which hazards.
- To ensure that the monitoring results reflect the actual conditions workers are being exposed to, monitoring should take place during a usual work day unless otherwise advised by your monitoring provider, and be conducted as personal sampling.
- For results of monitoring to be statistically significant, the monitoring provider needs to take sufficient samples.
- As exposure will normally vary from day to day, multiple samples may need to be taken at different times.
- Your monitoring provider should advise you on when and how often monitoring should occur.

BIOLOGICAL EXPOSURE MONITORING AND HEALTH MONITORING

- Your monitoring provider should advise you on when and how often monitoring should occur.
- Where possible, monitoring should take place during the worker's normal work hours. If this is not possible, discuss with workers other options. For example, could workers be compensated?
- For biological exposure monitoring, when samples will need to be collected will depend on the substance being tested for. For example, samples could need to be collected at the end of a shift, at the end of a shift at the end of a work week, or prior to a shift starting.
- Ask your monitoring provider if the testing will happen at your workplace, or if workers will need to go to a different location.
- If workers do need to travel, consider what you will need to organise so workers can easily do this during work time. Another option is, with the worker's agreement, organise for them to be tested before or after working hours. If you decide to do this, be aware of shift length and worker fatigue.
- If the monitoring will take place at your workplace, ask the provider what they need (for example, a private place to collect blood samples, suitably quiet and private area for hearing tests). If there are no suitable places to carry out the monitoring on site, it should be carried out off-site.
- Where possible, a baseline measurement should be taken before workers start to carry out the work. Baseline measurements could also be taken pre-employment.

FIGURE 4: Points to consider about when, where and how often monitoring will take place

For specific health hazards, there may be WorkSafe guidance on when/how often monitoring should occur.

Section 4.8 describes what to do if monitoring results show workers are at risk or being harmed.

Which workers will take part?

To get the best picture of what your workers are being exposed to, your monitoring provider should recommend which workers should be monitored. You, your monitoring provider and workers should then together discuss who should be monitored.

If you have a lot of workers exposed to the same work conditions, it may not be necessary to monitor all workers. Your monitoring provider will be able to advise how many workers (and which ones) should be monitored to get robust results.

EXAMPLE

Tom owns a small engineering firm. The work involves welding, and he is worried that breathing in welding fume may be affecting his workers' health. He brought in an expert who recommended that only the workers who work in the workshop undergo health monitoring (this involves testing their lung function). This meant his office workers – who work in a separate location – would not undergo health monitoring.

For exposure monitoring, your workers could be split into similar exposure groups (SEGs), and only randomly selected workers (representatives) from each SEG monitored.

EXAMPLE

Sarah has a widget manufacturing business. She is worried about the levels of welding fume. She decides to get an Occupational Hygienist in to monitor the welding fume levels workers are being exposed to.

When deciding which workers to be involved, it was decided that based on the initial health risk assessment (basic characterisation):

- office staff and warehouse staff were not required to take part (due to the low risk of exposure)
- welders and the assembly line would take part (the assembly line is near the welding bays). There were 7 welders and 10 assembly line workers.

The Occupational Hygienist developed a sampling strategy that would give good confidence on what the exposures are over time by choosing 5 out of 6 welders and 7 out of 10 assembly line workers, randomly selected. This strategy would be sufficient to get a representative sample of the whole groups' average exposure.

INFORMED CONSENT FROM WORKERS IS NEEDED BEFORE BIOLOGICAL EXPOSURE MONITORING AND HEALTH MONITORING

Workers must comply, as far as reasonably able, with any reasonable instruction given by you, so that you can meet your legal obligations.

However for biological exposure monitoring and health monitoring, the rights and duties in the *Code of Health and Disability Services Consumer's Rights* (the Code) will apply.

Under the Code, workers must **give their written informed consent** before undergoing biological exposure monitoring and health monitoring, and for you to have access to these monitoring results. While it is the monitoring providers' duty to obtain this consent, you may wish to become involved to support your workers.

Under the Code, workers have the right to:

- be fully informed
- make an informed choice and give informed consent.

Being 'fully informed' means workers must be given information about the health risks/consequences of the work and the proposed biological exposure monitoring or health monitoring, and be told this information in a way they can understand.

Workers must be given the information that they would reasonably expect to receive (for example, what options they have, what the risks, side effects and benefits of those options are, who will carry out the monitoring, who will have access to the results, how the results will be stored).

It is then up to workers to decide – they can say 'no' or change their mind at any time.

For further information:
The Code of Health and Disability Services Consumer Rights

WHAT SHOULD HAPPEN IF A WORKER DOES NOT WANT TO TAKE PART?

If a worker does not want to take part, find out the reasons why. With the worker, try to address their concerns.

However if the worker still does not want to take part, document this and consider what next steps to take to manage the health risks to that worker. For example, could the worker do different work that does not require this type of monitoring? Is there a way to eliminate the risk so this type of monitoring is not needed?

We recommend including biological exposure monitoring or health monitoring participation into employment agreements or contracts (with all the relevant information) so workers will know up-front about these requirements, and give their informed consent before they take the job. However, workers can still withdraw their informed consent at any time.

Ultimately, refusal to participate in biological exposure monitoring or health monitoring may give rise to an employment dispute. Similarly if you and the worker are not in a direct employment relationship, it could cause a contractual dispute. In these situations, the parties involved should seek advice from an appropriate employment or legal adviser.

Who will be your key contact with the monitoring provider?

Organising a staff member to be the key contact for the monitoring provider could mean reduced time and costs for your business.

The key contact should:

- book the monitoring appointments
- remind workers to go to their appointment (and re-book appointments for workers who miss theirs)
- coordinate transportation (if needed).

4.5 What information should you give to your monitoring provider?

Ideally, the monitoring provider should visit your work site to carry out a walk-through survey to better understand the risks/hazards, processes, tasks, control measures, workers and risks in order to design a monitoring programme.

Give your monitoring provider the information they need to carry out their tasks.

Figure 5 describes the kind of information to give to your monitoring provider. Discuss with workers what information the monitoring provider will be given.

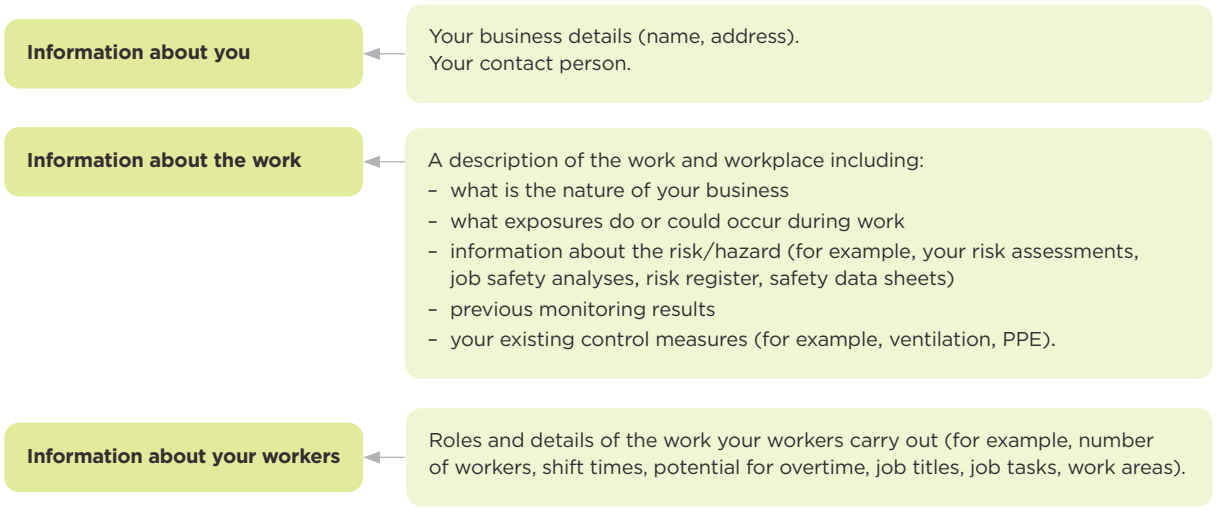


FIGURE 5: Examples of information to be given to monitoring providers

Providers should ask for more detailed information so they can provide you the type of monitoring to best manage your health risks. For example, they may ask for information about:

- your work processes
- the hazardous substances that you use or could be produced
- your job timing patterns (for example, hours/days and days/week)
- your workforce.

Information about your workforce may be needed to identify workers who could be more susceptible to the potential harm. Your monitoring provider may need to seek advice from a health professional to do this. This could be an Occupational Physician or GP with relevant experience.

4.6 What should the monitoring reports contain?

Discuss with the monitoring provider and workers what the monitoring reports will contain.

From the reports you receive, you should be told:

- what the exposure levels are (for example, in relation to WES or BEI)
- if the worker may have contracted a disease or illness because of work (for health monitoring)
- if there is a health risk that requires managing and if so, advice on how to manage the risk.

Reports should:

- have understandable language – not be too technical
- explain the method of testing (this can be used for repeatability)
- assess the level of health risk from exposure
- give clear recommendations on next steps.

Figure 6 provides examples of the kind of information the reports you receive from the monitoring provider should include.

For exposure monitoring include:

- your details
- the monitoring provider's details
- a description of the workplace and the work including worker roles and the details of their tasks
- health effects of the substances for which exposure monitoring has been conducted (if relevant)
- the control measures in place (including PPE worn) and their likely effectiveness
- changes since the last exposure monitoring (if applicable)
- how the monitoring was carried out (for example, sampling strategies, methods, equipment used, flow rates)
- the monitoring results
- discussion of the results including:
  - advice on whether workers are at risk of being exposed to the hazard(s) at potentially harmful levels
  - limitations of the assessment, including uncertainty
  - any recommendations to you and/or workers on whether the control measures are working effectively to minimise worker exposure to the hazard and advice on how exposures could be controlled.

For health monitoring include:

- your details
- the monitoring provider's details
- details about the worker, their role and the details of their tasks
- how the monitoring was carried out (when, where, how)
- any advice that the worker may have contracted a disease or an illness, or suffered an injury as a result of carrying out the work that triggered the need including:
  - comparing the worker's results to their baseline value (taken at the start of monitoring – ideally before they started that job)
  - adjusting for age and gender
  - looking for trends among the exposed workers
- any recommendations to you and/or the worker about next steps including medical assessments and referrals, whether the worker is able to continue to carry out work pending further investigation and advice on control measures.

For more specific information, see Appendix 12 for an example of a health monitoring report.

The report should not include information that breaches worker confidentiality.

FIGURE 6: Examples of information in monitoring reports

See if your monitoring provider can also provide you:

- a comparison with previous monitoring results
- a high level summary of the overall monitoring results (without any identifiable worker information) that you can readily share with your whole workforce or senior management (Section 4.9).

You should ask to receive reports in a prompt manner (within a reasonable timeframe agreed with the monitoring provider).

4.7 How should you share the monitoring results?

Take care when sharing monitoring results. There are Privacy Act requirements you need to be aware of before you share monitoring results containing personal information. See Section 4.1 for details on these.

Sharing results with the workers involved in the monitoring

Talk with workers about how you will share monitoring results.

Offer the workers being monitored a copy of their monitoring results as soon as you can after receiving them. Take care when emailing personal information.

Encourage workers to give a copy of their first (baseline) health monitoring results to their GP. If future monitoring shows there is a change from their baseline results, encourage workers to give this information to their GP.

If you are asked to, give previous monitoring results to anyone who may have been exposed to the health risk.

When workers leave the business, give them copies of the monitoring results that are relevant to them.

See Section 4.9 for sharing results with the rest of your workforce.

Sharing results with other businesses you share health and safety duties with

As described in Section 4.1, there may be times when you and another business need to monitor the same person's exposure or health. If it is relevant to share monitoring results, you should do so.

Sharing results with new monitoring providers

If you decide to change monitoring providers, we recommend giving the new provider copies of previous relevant monitoring results.

Sharing results with WorkSafe[3]

As part of their job, a WorkSafe Inspector can ask you (or the person who appears to be in charge or the workplace) for monitoring results. However, if this information contains identifiable personal health information, the worker's consent is required for it to be provided, examined or copied by the Inspector.

A WorkSafe-appointed health and safety medical practitioner[4] (HSMP) can also ask for monitoring records. They must also get worker consent as described above.

You can phone WorkSafe on 0800 030 040 if you have concerns about the quality of the monitoring carried out.

Sharing monitoring results if the business is sold

If the business is sold or ownership transferred, it is good practice to give the new owner copies of the past monitoring results.

[3] Under most circumstances, WorkSafe does not need to be notified about monitoring results except if you are monitoring under certain regulations such as the Health and Safety at Work (Asbestos) Regulations 2016 (see Appendix 6). However, you can raise health and safety concerns with us instead: worksafe.govt.nz

For information about what a notifiable illness is: worksafe.govt.nz

[4] A medical practitioner is a doctor registered with the Medical Council of New Zealand to practice medicine and holds a current practising certificate.

4.8 What will you do if monitoring results show workers are being harmed or at risk because of work?

If monitoring results show your workers are being harmed or at risk, you need to be prepared to take immediate action to eliminate or minimise the health risks to workers.

For example, when you receive monitoring results that:

- indicate the worker has been exposed to a work hazard at potentially harmful levels (for example, exposures are above WES)
- indicate the worker has ill-health as a result of work
- include a recommendation to you to take remedial action, for example:
  - for more training
  - suggested improvements to control measures
  - to provide PPE or
  - for further medical assessment/formal diagnosis of workers
- show a trend that indicates your control measures are not sufficient.

If this occurs, you should be ready to investigate, review your control measures and decide what actions you will take to eliminate or minimise the health risks to your workers.

You must engage with your workers when identifying hazards and assessing risks, and when making decisions about ways to eliminate or minimise risk. Your monitoring provider (or another relevant health and safety professional) may also be able to help you with this.

If you receive health monitoring results that indicate the worker has ill-health as a result of work

Part of this investigation could involve sending workers for further medical assessment/formal diagnosis/confirmation the ill-health is work-related. So with workers and the monitoring provider, decide (if needed):

- where workers will be sent for further medical assessment/formal diagnosis (for example, an Occupational Physician, GP or another health practitioner with relevant experience)
- what information you will need from that medical assessment to help you to manage the health risk and support affected workers (including further health assessments).

As a result, you may need to put new control measures in place or update existing ones. You may need to review your monitoring procedures (for example, frequency).

You also may need to:

- put additional control measures in place to manage the health and safety risks for affected workers
- organise additional health assessments.

See Appendix 11 for a health monitoring example.

In addition to above, Figure 7 shows when you should also review your control measures and monitoring procedures.

FIGURE 7: When to review control measures and monitoring procedures

EXAMPLE

Shirley is the owner of Repaint 'em – a business that repaints old houses. During its work, her workers are exposed to noise, dust and specifically lead paint dust when using electrical sanders to prepare surfaces.

Baseline testing

After discussions between Shirley and workers it was decided that baseline monitoring (on commencing employment) will take place to:

- check workers' hearing and lung function (spirometry) and
- ask questions about potential lead exposure prior to commencing work.

The baseline test results will allow for changes to be seen in hearing and lung function when the routine testing is done.

Routine monitoring

It was decided that routine monitoring will take place and include:

- monitoring exposure to noise and lead (using an Occupational Hygienist to carry out noise assessments and airborne lead exposure monitoring) and
- monitoring exposure to lead (by an Occupational Health Nurse taking blood tests to check for lead levels – biological exposure monitoring) and
- monitoring health – hearing tests and spirometry (by an Occupational Health Nurse).

Jonno is an experienced Occupational Health Nurse (member of HASANZ and with post grad qualifications) who was bought in to carry out the hearing and spirometry tests, and lead blood tests. This year Jonno performed routine monitoring which including a questionnaire, hearing and lung function tests and took blood samples for lead testing. He found 3 of 6 workers had deteriorating hearing levels and two had higher than expected lead levels.

With each worker, Jonno discussed their results and talked about whether there were any changes. Jonno was told that they were using new sanders which were very loud and made much finer dust that seemed to get everywhere.

Jonno let Shirley know this (all workers consented to being named).

Shirley talked with her workers and found that while the type of respiratory protective equipment (RPE) used was still appropriate, it no longer fitted properly (too old) and needed replacing. The fit testing of new RPE would also be required.

Shirley requested that an urgent noise assessment be carried out (she had forgotten to get a noise assessment carried out when the new sanders arrived).

In the interim, additional hearing protection was supplied to workers. Shirley was advised that a higher grade of hearing protection was required if these new sanders were going to continue to be used.

After discussing with workers, Shirley found that workers preferred using the new sanders as they were much faster and easier to use. Everyone agreed to continue to use the sanders, but only after workers had been trained to use and care for the new hearing protection, and fit tested for the replacement RPE.

4.9 How are you going to regularly report back to all workers and others on how well you are managing all your health risks?

It is important to show others how well you are managing your health risks. This could include your entire workforce and those who make decisions that impact health and safety (like senior managers and board members).

Exposure monitoring and health monitoring results, and information about verification of control measures will together give a more complete picture of how well your health risks are being managed.

As described in Section 4.6, you could see if your monitoring provider can provide you a high level summary of the overall monitoring results (without any identifiable worker information) that you can readily share with others.

With workers, agree on how you will regularly report back on how well health risks are being managed.

Using performance indicators

A way to measure performance is by using performance indicators. Performance indicators can provide you a picture of how effectively you are managing health risks.

Table 3 provides examples of indicators that you could use related to monitoring. Use both leading and lagging indicators to get a clearer picture.

TYPE OF INDICATOR	DESCRIPTION	EXAMPLE
Leading	Measure future performance. Measures activities carried out to prevent harm.	– % health hazards with a monitoring programme. – % workers who are trained and understand monitoring processes and procedures. – % workers taking part in regular monitoring for whom monitoring is indicated. – % employee agreements that include participation in monitoring programmes for whom monitoring is indicated.
Lagging	Measure past performance – they are a record of things that have already occurred (for example, the number of health and safety injuries).	– % unacceptable monitoring test results. – % health issues or incidents awaiting follow-up action. – % identified health hazards awaiting risk assessments.

TABLE 3: Examples of leading and lagging indicators for monitoring

You could present these indicators and other health and safety information in a dashboard. See Appendix 13 for an example.

5.0
Once decisions have been made

IN THIS SECTION:

Have transparent monitoring policies and processes, and clear information and training so workers know what is expected of them.

Once the decisions have been made, think about what information and training you will provide for your workers, and what policies and procedures are needed.

5.1 Put in place information and training for workers

Information for workers

Provide information to workers about the monitoring. Table 4 describes the kind of information to provide your workers.

TOPIC	For example, provide information on:
Why the monitoring is being carried out	– how the work could harm worker health. – what the information is being collected for/how the monitoring will be used to improve how you are managing health risks.
Who pays	– the business covering all expenses related to the monitoring.
What will happen during the monitoring	– who will carrying out the monitoring. – where the monitoring will take place (and if off-site, how the worker will get to that location and back to work). – what the worker will have to do (for example, wear a device, give blood or urine, complete a questionnaire). – what the risks/side effects of the monitoring are (if any). – what the monitoring will not do (for example, the device will not record what they are saying, and not be used for other purposes such as drug testing).
When the monitoring will take place	– the approximate time of the work day the monitoring will take place, how long for and how often.
What information you will give the monitoring provider	– what information about the work/workers you will give to the monitoring provider, for example: - worker information (for example, job titles, shift times, work areas) - safety data sheets - previous monitoring results - risk registers - risk assessments.
What information will be in the monitoring report	– what will be covered, for example: - details of the monitoring (for example, who, when, where, how, how often) - individual monitoring results and average results for each similar exposure group (SEG) – for exposure monitoring - a discussion of the results and any advice and recommendations for managing any health risks.

TOPIC	For example, provide information on:
Handling personal information (if relevant)	– who will have access to the personal information and how will it be securely stored.
Sharing monitoring results	– how you are going to share monitoring results with the workers being monitored and all workers. – how past monitoring results will be made available to workers. – other PCBUs who will receive a copy of the monitoring results (if relevant).
How long you are going to store monitoring results	– how the monitoring results will be retained and stored.
What you will do as a result of the monitoring	– how you will review and improve control measures if the monitoring results indicate workers are at risk.
Additional information for biological exposure monitoring and health monitoring	
Worker consent for biological exposure monitoring or health monitoring	– the worker's right to give informed consent to biological exposure monitoring or health monitoring. – what will happen if a worker does not give consent. Section 4.4 describes what information to provide workers when seeking their informed consent.

TABLE 4: Examples of information to provide workers about monitoring

See Appendix 9 for an example of a completed information sheet for workers for exposure monitoring.

See Appendix 10 for an example of a completed information sheet for biological exposure monitoring.

See Appendix 11 for an example of a completed information sheet for health monitoring.

While it is good practice to write down your policies and procedures, documents are not the only way that you can share important information. So when thinking about the best way to provide information to your workers, consider your workers':

- age and experience
- first language
- ability to read and write
- culture (if relevant).

Discuss with workers what information will be provided to them and how it will be provided. For example, you could give workers written information and then organise for someone to meet with workers to talk through the information and answer any questions.

Think about how you can check workers understand the information you provide.

Think about when the best time to deliver this information is (for example, not in the middle of a noisy workshop).

EXAMPLE

Olivia decided to set up a monitoring programme.

When Olivia thought about the best way to provide information to her workers, she knew from previous experience that her workers did not learn well in groups or from just reading written material. So she organised separate meetings with each worker (and their support person) to explain about the monitoring process. She hoped this would allow workers to freely ask questions and allow her to deal with any concerns directly.

Once you provide workers with the monitoring information, give them the opportunity to consider the information and ask further questions before monitoring begins.

Training for workers

For certain types of harms, workers can be trained to look for early signs of harm and report them to you. Examples include skin irritation/dermatitis from exposure to certain substances, and nerve damage from vibration. This means that you will be able to act promptly before further harm occurs.

With workers, think about:

- who you need to get advice from about symptoms and how to check for them
- how to train workers to carry out the checks
- how you will remind workers to carry out the checks
- how workers will report early signs of harm to you
- when you will bring in a health and safety professional for further investigation.

5.2 Put in place transparent policies and processes

Put policies and processes in place that cover:

- how you will select the monitoring provider
- when workers are required to undergo monitoring and what monitoring is required (what type, when, where and how often)
- what you will do if a worker does not want to be involved in the monitoring
- how you store monitoring results
- how you share monitoring results (including when workers leave or the business closes or is sold)
- how you will use the monitoring results to manage health risks
- what information you will provide new and existing workers about the monitoring and how you will provide it
- how workers can raise concerns about the monitoring carried out or requests for further monitoring or investigation
- how you engage workers when making decisions about the points described above.

Make sure workers understand the policies and processes.

With your workers, regularly check how well the policies and processes are going.

Appendices

IN THIS SECTION:

Appendix 1: Glossary

See Appendices 2–5 for key HSWA terms and explanations.

TERM	EXPLANATION
Biological exposure index (BEI)	For a substance, indicates its concentration (usually in blood, urine) below which nearly all workers should not experience adverse health effects from exposure to a particular substance. BEI values can be found on our website: worksafe.govt.nz
Competent person	A suitably qualified, trained and experienced person with the knowledge, skills and experience to carry out the monitoring required including interpretation of results.
Hazardous substances	A chemical or mixture of chemicals that has one or more of the following properties: – an explosive nature, including fireworks – flammability (for example, petrol, turps, LPG, diesel) – ability to oxidise, accelerate a fire (for example, hydrogen peroxide) – corrosiveness (for example, caustic drain cleaner) – acute or chronic toxicity to humans (for example, arsenic).
Health practitioner	A person registered with an authority as a practitioner of a particular health profession. Their practice is bound by the Health Practitioners Competence Assurance Act 2003: www.legislation.govt.nz This is someone who has the right qualifications and experience, and competence is ensured by their current certification.
Personal information	Information about an identifiable person. For more information, go to: www.privacy.org.nz
Substances hazardous to health	Means a substance, or product containing a substance, that is known or suspected to cause harm to health. It includes: – a substance classified as having toxic or corrosive properties under the Hazardous Substances and New Organisms Act 1996 – a substance for which a prescribed exposure standard exists – a substance specified in a safe work instrument as requiring health monitoring.
Workplace exposure standard (WES)	For a substance, refers to the airborne concentration of a substance at which it is believed nearly all workers can be repeatedly exposed to day after day without coming to harm. You should aim to have airborne concentrations well below the WES value. WES values can be found on our website: worksafe.govt.nz

Appendix 2: Health and Safety at Work Act duties

The Health and Safety at Work Act 2015 (HSWA) is New Zealand's key work health and safety law.

All work and workplaces are covered by HSWA unless they have been specifically excluded. For example, HSWA does not apply to the armed forces in certain situations.

HSWA sets out the work health and safety duties that duty holders must comply with.

There are four types of duty holder under HSWA:

- a person conducting a business or understanding (PCBU)
- an officer
- a worker
- an 'other person' at the workplace.

Most duties under HSWA relate to **how** work is carried out. However some duties are linked to **where** work is carried out: the workplace.

A **workplace** is a place where work is being carried out or usually carried out for a business or undertaking. It includes any place where a worker goes or is likely to be while at work section 20 of HSWA

DUTY HOLDER	WHO THEY ARE?	EXAMPLES	WHAT ARE THEIR DUTIES?	FOR MORE INFORMATION
Person Conducting a Business or Undertaking (PCBU)	A person conducting a business or undertaking (PCBU) may be an individual person or an organisation	– a business – a self-employed person – partners in a partnership – a government agency – a local council – a school or university.	A PCBU has many duties. Key duties are summarised below. **Primary duty of care** section 36 of HSWA A PCBU must ensure, so far as is reasonably practicable, the health and safety of workers, and that other persons are not put at risk by its work.	Introduction to the Health and Safety at Work Act 2015 Appendix 3 of this guidance for an explanation of 'so far as is reasonably practicable'
	The following **are not** PCBUs: – officers – workers – other persons at a workplace – volunteer associations that do not have employees – home occupiers (such as home owners or tenants) who pay someone to do work around the home section 17 of HSWA		**Managing risks** section 30 of HSWA Risks to health and safety arise from people being exposed to hazards (anything that can cause harm). A PCBU must manage work health and safety risks. – A PCBU must first try to **eliminate** a risk so far as is reasonably practicable. This can be done by removing the source of harm – for example, removing faulty equipment or a trip hazard. – If it is not reasonably practicable to eliminate the risk, it must be **minimised** so far as is reasonably practicable.	Identifying, assessing and managing work risks
			Overlapping duties: working with other PCBUs section 34 of HSWA A PCBU with overlapping duties must, so far as is reasonably practicable, consult, cooperate and coordinate activities with other PCBUs they share duties with.	Appendix 4 of this guidance

DUTY HOLDER	WHO THEY ARE?	EXAMPLES	WHAT ARE THEIR DUTIES?	FOR MORE INFORMATION
			Involving workers: worker engagement, participation and representation Part 3 of HSWA A PCBU must, so far as is reasonably practicable, engage with their workers (or their workers' representatives) about health and safety matters that will directly affect the workers. A PCBU must have worker participation practices that give their workers reasonable opportunities to participate in improving health and safety on an ongoing basis.	Appendix 5 of this guidance
Upstream PCBU	A PCBU in the supply chain	– a designer – a manufacturer – a supplier – an importer – an installer, constructor, or commissioner.	**Upstream PCBU** sections 39–43 of HSWA An upstream PCBU must ensure, so far as is reasonably practicable, that the work they do or the things they provide to other workplaces do not create health and safety risks.	Introduction to the Health and Safety at Work Act 2015
Officer	A specified person or a person who exercises significant influence over the management of the business or undertaking section 18 of HSWA	– a company director – a partner or general partner – a chief executive.	**Officer** section 44 of HSWA An officer must exercise due diligence that includes taking reasonable steps to ensure that the PCBU meets their health and safety duties.	Introduction to the Health and Safety at Work Act 2015
Worker	An individual who carries out work for a PCBU section 19 of HSWA	– an employee – a contractor or sub-contractor – an employee of a contractor or sub-contractor – an employee of a labour hire company – an outworker (including homeworker) – an apprentice or trainee – a person gaining work experience or on work trials – a volunteer worker.	**Worker** section 45 of HSWA A worker must take reasonable care of their own health and safety, and take reasonable care that they do not harm others at work. A worker must cooperate with reasonable policies and procedures the PCBU has in place that the worker has been told about. A worker must comply, as far as they are reasonably able, with any reasonable instruction given by the PCBU so the PCBU can meet their legal duties.	Introduction to the Health and Safety at Work Act 2015
Other person at the workplace	An individual present at a workplace (not a worker)	– a workplace visitor – a casual volunteer (not a volunteer worker) – a customer.	**Other person at the workplace** section 46 of HSWA An 'other person' has a duty to take reasonable care of their own health and safety, and not adversely affect the health and safety of anyone else. They must comply with reasonable instructions relating to health and safety at the workplace.	Introduction to the Health and Safety at Work Act 2015

Appendix 3: So far as is reasonably practicable

section 22 of HSWA

Certain PCBU duties (the section 36–43 duties including the primary duty of care) must be carried out 'so far as is reasonably practicable'.

What to consider when deciding what is 'reasonably practicable'

Just because something is possible to do, does not mean it is reasonably practicable in the circumstances.

Consider:

- What possible actions can be taken to ensure health and safety?
- Of these possible actions, at a particular time, what is reasonable to do?

Think about the following questions.

WHAT IS KNOWN ABOUT THE RISK?

- How likely is the risk to occur?
- How severe is the illness or injury that might occur if something goes wrong?
- What is known, or should reasonably be known, about the risk?

WHAT IS KNOWN ABOUT POSSIBLE CONTROL MEASURES?

- What is known, or should reasonably be known, about the ways (control measures) to eliminate or minimise the risk?
- What control measures are available?
- How appropriate (suitable) are the control measures to manage the risk?
- What are the costs of these control measures?
- Are the costs grossly disproportionate to the risk? Cost must only be used as a reason to not do something when that cost is grossly out of proportion to the risk.

While PCBUs should check if there are widely used control measures for that risk (such as industry standards), they should always keep their specific circumstances in mind. A common industry practice might not be the most effective or appropriate control measure to use.

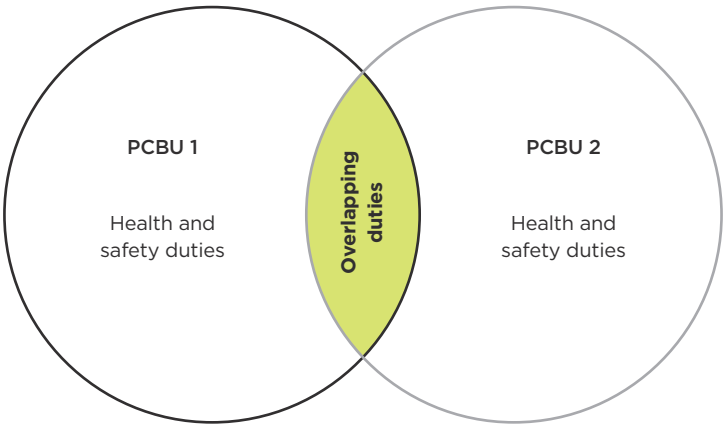
If PCBUs are not sure what control measures are appropriate, WorkSafe recommends getting advice from a suitably qualified and experienced health and safety professional.

For more information, see our guidance: Reasonably practicable

Appendix 4: Working with other PCBUs – overlapping duties

section 34 of HSWA

More than one PCBU can have a duty in relation to the same matter. These PCBUs have overlapping duties – this means that the duties are shared between them.



Duties regularly overlap:

- in a shared workplace (for example, a building site or a port) where more than one business has control and influence over the work on site.
- in a contracting chain, where contractors and subcontractors provide services to a head contractor or client and do not necessarily share the same workplace.

A PCBU must, so far as is reasonably practicable, consult, cooperate and coordinate activities with all other PCBUs they share duties with so that all PCBUs can meet their joint responsibilities.

A PCBU cannot transfer or contract out of their duties, or pass liability to another person.

However a PCBU can make an agreement with another PCBU to fulfil specific duties. Even if this occurs, all PCBUs are still responsible for meeting their legal duties.

EXAMPLE

A local hotel contracts out housekeeping services to an agency. The hotel and agency both have a duty to ensure the health and safety of the housekeeping workers, so far as is reasonably practicable. This includes the duty to provide first aid facilities.

The agency reaches an agreement with the hotel – if their workers need first aid while working at the hotel they can use the hotel's first aid facilities.

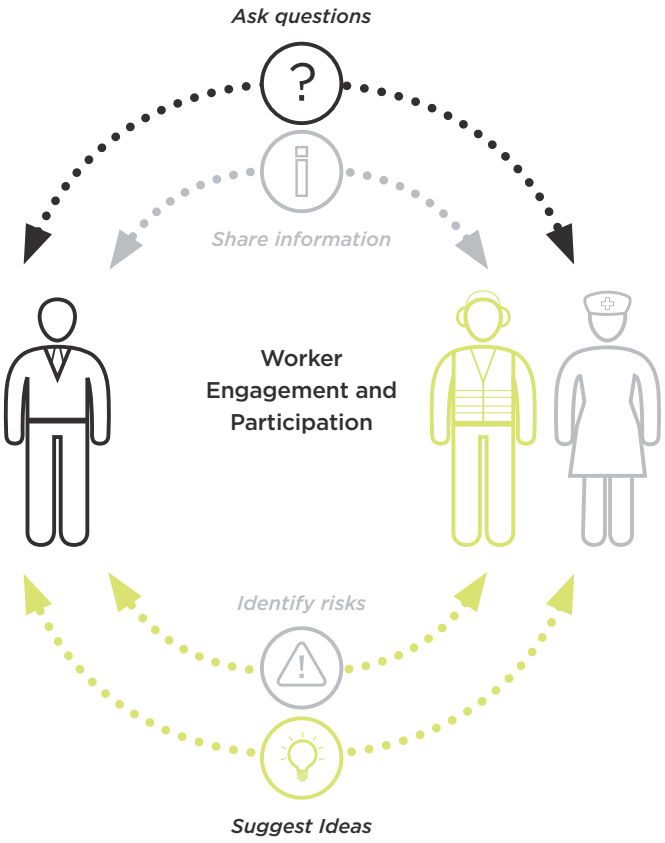
For more information, see our guidance: Overlapping duties

Appendix 5: Worker engagement, participation and representation Part 3 of HSWA

Engage with workers and enable their participation

A PCBU has two main duties related to worker engagement and participation:

- to engage with workers on health and safety matters that affect or are likely to affect workers, so far as is reasonably practicable, and
- to have practices that give workers reasonable opportunities to participate effectively in the ongoing improvement of work health and safety.



A PCBU can engage with workers by:

- sharing information about health and safety matters so that workers are well-informed, know what is going on and can contribute to decision-making
- giving workers reasonable opportunities to have a say about health and safety matters
- listening to and considering what workers have to say at each step of the risk management process
- considering workers' views when health and safety decisions are being made
- updating workers about what decisions have been made.

A PCBU must engage with workers during specified times, including when identifying hazards and assessing risks.

A PCBU must have clear, effective, and ongoing ways for workers to suggest improvements or raise concerns.

Worker representation

Workers can be represented by a Health and Safety Representative (HSR), a union representing workers, or a person that workers authorise to represent them (for example, a community or church leader, or another trusted member of the community).

HSRs and Health and Safety Committees (HSCs) are two well-established methods of participation and representation. If workers are represented by an HSR, worker engagement must also involve that representative.

For more information

WORKSAFE GUIDANCE

Good practice guidelines

Worker engagement, participation and representation

Interpretive guidelines

Worker representation through Health and Safety Representatives and Health and Safety Committees

Pamphlets

Worker representation

Health and Safety Committees

Health and Safety Representatives

Appendix 6: Exposure monitoring and health monitoring required by HSW Regulations

Some Regulations may require you to carry out exposure monitoring or health monitoring for certain health risks. Below are examples of work that requires monitoring.

Note: Even if you do not need to monitor under these Regulations, you must ensure, so far as is reasonably practicable, the health and safety of workers, and that other people are not put at risk by your work. In some circumstances, this could mean monitoring worker exposure and the health of workers.

Appendix 6a: List of HSW Regulations and monitoring requirements

WORK INVOLVES	WHEN	REGULATIONS
Exposure monitoring		
Asbestos (this is air monitoring rather than exposure monitoring but is included for completeness)	Air monitoring when Class A asbestos removal work occurs. For more information, see our guidance: Management and Removal of Asbestos	Health and Safety at Work (Asbestos) Regulations 2016 regulation 43
Lead	A Medical Officer may require the examination of the blood or urine of workers if they consider workers may be absorbing lead in a quantity likely to injure health.	The Lead Process Regulations 1950 regulation 24
Substances hazardous to health	If the PCBU is not certain on reasonable grounds whether the concentration of a substance hazardous to health at the workplace exceeds its relevant **prescribed exposure standard**. For more information about prescribed exposure standards, see Appendix 6b. For more information, see our guidance: General risk and workplace management: Part 1 (Section 5)	Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 regulation 30
Mining operations	– Monitor and assess airborne dust and contaminants at the mine – Regularly monitor the atmosphere at the mining operation to manage hazards associated with unsafe concentrations of oxygen, methane, and other gases in the air. The monitoring measures must be detailed in the principal hazard management plan for air quality.	Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016 – Principal hazard management plans for air quality regulation 84
Health monitoring		
Asbestos	– If the worker is carrying out licensed asbestos removal work at a workplace **and** is at risk of exposure to asbestos when carrying out the work (within 4 weeks of starting the work). **OR** – If the worker is carrying out other ongoing asbestos removal work or asbestos-related work **and** is at risk of exposure to asbestos when carrying out the work. **This does not include** Class B asbestos removal work if for less than 4 weeks in any 12 month period. For more information including when to notify WorkSafe about monitoring results, see our guidance: General risk and workplace management: Part 1 (Section 6)	Health and Safety at Work (Asbestos) Regulations 2016 regulation 15 regulation 16

WORK INVOLVES	WHEN	REGULATIONS
Substances hazardous to health	If the worker is carrying out ongoing work involving a substance hazardous to health that is **specified in a safe work instrument (SWI)** as requiring health monitoring **and** there is a serious risk to the worker's health because of exposure to that substance. There is one substance specified in a SWI as requiring health monitoring. The substance is the fumigant ethanedinitrile (EDN). For more information on these requirements, see the SWI: worksafe.govt.nz For more information including when to notify WorkSafe about monitoring results, see our guidance: General risk and workplace management: Part 1 (Section 6)	Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 regulation 31
Lead	A Medical Officer* may require workers to undergo a medical examination if they consider workers may be absorbing lead in a quantity likely to injure health.	The Lead Process Regulations 1950 regulation 24
Mining, quarrying or alluvial mining operations	The operator must offer medical examinations to each mine, quarry and alluvial mine worker: – immediately before the worker starts work at the operation – immediately before the worker ceases working, if the worker has not been examined within the 12 months before that date – periodically throughout the time that the worker is working at the operation, but no less than once every 5 years – if a worker wishes to be examined.	Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016 regulation 127 regulation 128

* This is a Medical Officer of Health or a medical practitioner authorised by the Director-General of Health to exercise the powers and perform the duties of a Medical Officer under these regulations.

Appendix 6b: Prescribed exposure standards (PES)

A PES is a workplace exposure standard (WES) or a biological exposure index (BEI) that has the purpose of protecting persons in a workplace from harm to health and that is prescribed in:

- regulations or
- a safe work instrument (SWI).

PES PRESCRIBED IN HSW REGULATIONS

At the time of publishing, no PES have been prescribed in HSW Regulations.

PES PRESCRIBED IN SWIs

At the time of publishing, there is one PES – for the fumigant ethanedinitrile (EDN). For more information: worksafe.govt.nz

WES, BEI and PES explained

WES are values that refer to the airborne concentration of substances at which it is believed that nearly all workers can be repeatedly exposed day after day without coming to harm.

BEIs are guidance values for assessing biological monitoring results. Biological monitoring measures the concentration of a substance – or its breakdown products - in blood or urine or even exhaled air and the monitoring result is compared to the BEI established for the specific substance.

As described above, a PES is a WES or a BEI that has the purpose of protecting persons in a workplace from harm to health and that is prescribed in:

- regulations or
- a SWI.

See above for information about existing PES.

The WES and BEI values in the WorkSafe WES/BEI book **are not PES** and are therefore guidance values. They are intended to be used by qualified occupational health practitioners with the appropriate knowledge, skills and experience to apply them for health risk assessment.

Health risk management must consider a number of aspects from identification, to assessment, to control, with exposure monitoring being just one part – not the only part that needs to be considered. WES and BEI are important tools for monitoring worker exposures.

Appendix 7: Common examples of exposure monitoring and health monitoring

This is not a complete list. It provides examples of possible monitoring methods and who could carry it out. A suitably qualified, trained and experienced health and safety professional can advise on the most appropriate methods for your circumstances.

SOURCE OF HARM	EXAMPLES OF EXPOSURE MONITORING, AND WHO SHOULD CARRY IT OUT		EXAMPLES OF HEALTH MONITORING, AND WHO SHOULD CARRY IT OUT
	Non-biological exposure monitoring	Biological exposure monitoring	
Biological hazards (for example, bacteria, fungi)	Measures the level and type of bacteria and fungi and their by-products in the air or on skin. Carried out by a competent person* such as an Occupational Hygienist.	Detects the presence of bacteria or fungi (for example, in bodily products). To take blood: – health practitioners with relevant experience (for example, registered nurse, phlebotomist). To collect other bodily fluids/products and to analyse or interpret test results: – a competent person such as a health practitioner or Occupational Hygienist.	Looks for airway inflammation and disease, asthma-like symptoms, infection, and allergic reactions. Carried out by health practitioners with relevant experience. For example, an Occupational Health Nurse could carry out an initial assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician or GP with relevant experience.
Airborne particulates (for example, dusts such as wood dusts, welding fume etc)	Measures the amount of particulate in air that workers are exposed to and compares with the relevant **workplace exposure standard (WES)**. Carried out by a competent person such as an Occupational Hygienist.	Measures the amount of certain metals from welding fume in workers' blood or urine and compares to the relevant biological exposure index (BEI). To take blood: – health practitioners with relevant experience (for example, registered nurse, phlebotomist). To analyse or interpret test results: – a competent person such as a health practitioner or Occupational Hygienist.	Checks for loss of lung function. Uses a lung function questionnaire. Uses spirometry – measures the speed and volume that lungs are emptied of air to detect lung damage (from the initial baseline lung function). Results are compared with previous spirometry results if available. Carried out by health practitioners or a competent person with relevant experience. For example, an Occupational Health Nurse could carry out an initial assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician or GP with relevant experience.

* A 'competent person' is a suitably qualified and experienced person with the knowledge, skills and experience to carry out the monitoring required.

SOURCE OF HARM	EXAMPLES OF EXPOSURE MONITORING, AND WHO SHOULD CARRY IT OUT		EXAMPLES OF HEALTH MONITORING, AND WHO SHOULD CARRY IT OUT
	Non-biological exposure monitoring	Biological exposure monitoring	
Organic solvents (for example, toluene, thinners, MEK)	Measures the amount of solvent in air that workers are exposed to and compares with the relevant WES. Carried out by a competent person such as an Occupational Hygienist.	Measures the amount of solvent in workers' blood or urine and compares to the relevant BEI. To take blood: – health practitioners with relevant experience (for example, registered nurse, phlebotomist). To collect urine and to analyse or interpret test results: – a competent person such as a health practitioner or Occupational Hygienist.	Checks for neurological damage. Uses a questionnaire as a screening tool to identify workers showing symptoms of neurological damage. Carried out by health practitioners with relevant experience. For example, an Occupational Health Nurse could carry out an initial assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician or GP with relevant experience.
Lead	Measures the amount of lead in air that workers are exposed to and compares with the relevant WES. Carried out by a competent person such as an Occupational Hygienist.	Measures the amount of lead in workers' blood and compares to the relevant BEI. To take blood: – health practitioners with relevant experience (for example, registered nurse, phlebotomist) – measures the amount of lead in workers' urine. To collect urine and to analyse or interpret test results: – a competent person such as a health practitioner or Occupational Hygienist.	Checks for evidence of lead poisoning. Uses medical examinations to look for the physical and cognitive effects of lead poisoning. Carried out by health practitioners with relevant experience. For example, an Occupational Health Nurse could carry out an initial assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician or GP with relevant experience.
Substances that can irritate the skin (for example, epoxy resins, latex, soaps and cleaners, cement, hair dyes, wood dust, industrial enzymes)	Measures the amount of substance that workers are exposed to and compares with the relevant WES. Determines the presence of the substance on the skin (through wipe sampling). Carried out by a competent person such as an Occupational Hygienist.	Measures the amount of substance in workers' blood or urine and compares to the relevant BEI. To take blood: – health practitioners with relevant experience (for example, registered nurse, phlebotomist). To collect urine and to analyse or interpret test results: – a competent person such as a health practitioner or Occupational Hygienist.	Checks for skin inflammation/dermatitis. Uses visual checks for: – redness of skin – itching – pain/burning – dry or scaly – oozing blisters. Carried out by health practitioners with relevant experience. For example, an Occupational Health Nurse could carry out an initial assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician or GP with relevant experience.

SOURCE OF HARM	EXAMPLES OF EXPOSURE MONITORING, AND WHO SHOULD CARRY IT OUT		EXAMPLES OF HEALTH MONITORING, AND WHO SHOULD CARRY IT OUT
	Non-biological exposure monitoring	Biological exposure monitoring	
Loud noise (for example, >85 decibels (A-weighted 8 hour average levels) or peak levels 140 decibels or greater) Also see the next row for substances that can damage hearing	Measures the amount of noise workers are exposed to. Carried out by a competent person such as an Occupational Hygienist. **Note**: While a preliminary assessment of noise risk can be carried out by anyone, a detailed assessment must be carried out by a competent person.		Checks for hearing loss. Uses hearing tests (audiometry) to detect hearing damage/loss (from the initial baseline level). Carried out by health practitioners or a competent person with relevant experience for initial screening tests to identify potential problems, subsequent routine regular testing, and provide referrals if needed. Carried out by audiologists for full diagnostic tests if a problem is identified above.
Substances that can damage hearing (for example, ototoxic substances such as paints, solvents, thinners, glues)	Measures the amount of substance in air that workers are exposed to and compares with the relevant WES. Carried out by a competent person such as an Occupational Hygienist.	Measures the amount of substance in workers' blood or urine and compares to the relevant BEI. To take blood: – health practitioners with relevant experience (for example, registered nurse, phlebotomist). To collect urine and to analyse or interpret test results: – a competent person such as a health practitioner or Occupational Hygienist.	Checks for hearing loss. Uses hearing tests (audiometry) to detect hearing damage/loss (from the initial baseline level). Carried out by health practitioners or a competent person with relevant experience for initial screening tests to identify potential problems, subsequent routine regular testing, and provide referrals if needed. Carried out by audiologists for full diagnostic tests if a problem is identified above.

SOURCE OF HARM	EXAMPLES OF EXPOSURE MONITORING, AND WHO SHOULD CARRY IT OUT		EXAMPLES OF HEALTH MONITORING, AND WHO SHOULD CARRY IT OUT
	Non-biological exposure monitoring	Biological exposure monitoring	
Vibration (for example, from hand-held vibrating tools, heavy plant such as bulldozers, trucks)	Measures the amount of vibration that workers' arms, hands or whole body are exposed to. Carried out by a competent person such as an Occupational Hygienist.		Checks for nerve, muscle or circulation damage in hands, wrists and arms, and lower back. Uses a questionnaire about symptoms for workers to complete on a regular basis, for example: – numbness or tingling of fingers – pain in hand or wrist – fingers that go white especially in cold weather – loss of sensitivity and strength in hands – have difficulty picking up very small objects or opening tight jars – discomfort including lower back pain. Carried out by health practitioners with relevant experience. For example, an Occupational Health Nurse could carry out an initial assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician.
Thermal environment (for example, including air temperature, surface temperature, humidity, air flow etc)	Measures various appropriate heat or cold indices. Carried out by a competent person such as an Occupational Hygienist.		Checks worker age, weight, physical fitness, medical conditions, medication taken, and history of heat disorders, frostbite and hypothermia. Carried out by health practitioners or a competent person with relevant experience. For example, an Occupational Health Nurse could carry out an initial assessment (health screening) and subsequent routine regular testing. If suspected, workers should be sent to a health practitioner who understands occupational health for a full medical assessment/formal diagnosis and feedback to the PCBU. This could be an Occupational Physician or GP with relevant experience.
			Measures a worker's hydration status using urine specific gravity, body temperature and heart rate. To collect urine, body temperature and heart rate, and to analyse test results: Carried out by a competent person such as an Occupational Health Nurse.

SOURCE OF HARM	EXAMPLES OF EXPOSURE MONITORING, AND WHO SHOULD CARRY IT OUT		EXAMPLES OF HEALTH MONITORING, AND WHO SHOULD CARRY IT OUT
	Non-biological exposure monitoring	Biological exposure monitoring	
Heavy lifting, bending, repetitive movements, screen use	Gathers data to evaluate the activity risks against known standards, charts, and checklists. Uses a range of formal human factors/ergonomics techniques Carried out by a competent person such as a Human Factors Professional/Ergonomist.		Checks for early signs of musculoskeletal damage. Uses a questionnaire about symptoms for workers to complete on a regular basis. Considers other indicators that might indicate musculoskeletal or psychosocial harm risks. Carried out by health practitioners (such as Occupational Health Nurses, Workplace Physiotherapists or Occupational Therapists) with relevant experience. Workers may require a further physical/medical assessment, with formal diagnosis and feedback to the PCBU. This could be by an Occupational Physician, GP with relevant experience, or physiotherapist.

Appendix 8: More information about some professionals involved in monitoring (not a complete list)

TYPE OF PROFESSIONAL	WHAT MONITORING SERVICES CAN THEY PROVIDE?	QUALIFICATIONS AND CERTIFICATIONS TO LOOK FOR	PROFESSIONAL ASSOCIATION MEMBERSHIPS TO LOOK FOR
Occupational Hygienists	Provide a range of worker exposure monitoring services, for example: – identifying work-related health hazards – assessing worker exposure to physical, chemical or biological agents – helping PCBUs and workers to understand work-related health risks – recommending ways to eliminate or minimise work risks – evaluating the effectiveness of control measures.	Qualifications to look for: – relevant qualifications including: - an undergraduate or postgraduate qualification in occupational hygiene - the International Certificate in Occupational Hygiene (OHTA) - a Bachelor's degree or Diploma in Science or Engineering (or equivalent) acceptable to the NZOHS Council – experience in the type of monitoring you need. Certifications to look for: – from an equivalent overseas society (for example, COH (Australia), CIH (USA), LFOH/CMFOH (UK), ROH (South Africa)).	A full member of a professional association like: – NZ Occupational Hygiene Society (NZOHS): https://nzohs.org.nz – An equivalent overseas society (for example, AIOH (Australia), BOHS (UK)). Also see if they have relevant competencies listed on the HASANZ Register: https://register.hasanz.org.nz
Occupational Health Nurses	Provide a range of workplace health services including: – health screening (for example, lung function tests, hearing testing) including referrals for further medical assessment (for example to Occupational Physicians, Audiologists, GPs). – helping PCBUs and workers to understand work-related health risks – providing prevention/management (and wellbeing) programmes – evaluating the effectiveness of PPE – employment screening – wellness screening/vaccinations – supporting the rehabilitation of people with work and non-work illness and injury.	Qualifications to look for: – is a registered nurse – has a current practising certificate – has experience in the type of monitoring you need – has evidence of current training and experience.	A member of a professional association like the NZ Occupational Health Nurses Association. Also see if they have relevant competencies listed on the HASANZ Register: https://register.hasanz.org.nz
Occupational Physicians	Deal with medical referrals to: – prevent and manage people with work-related illness and injury – facilitate ill or injured workers return to work.	Qualifications to look for: – is a registered Medical Practitioner – has a FAFOEM qualification – has a current practising certificate – has experience in the type of health monitoring you need.	A member of a professional association like: – Australasian Faculty of Occupational and Environmental Medicine (AFOEM) – The Australian and New Zealand Society of Occupational Medicine Inc. (ANZSOM).

TYPE OF PROFESSIONAL	WHAT MONITORING SERVICES CAN THEY PROVIDE?	QUALIFICATIONS AND CERTIFICATIONS TO LOOK FOR	PROFESSIONAL ASSOCIATION MEMBERSHIPS TO LOOK FOR
General Practitioners (GPs)	Deal with medical referrals: – to diagnose work-related illness or injury – if needed, can refer to other practitioners for further medical assessment/formal diagnosis.	Qualifications to look for: – is a registered Medical Practitioner – has the Fellowship of the RNZCGP (FRNZCGP) qualification – has post grad diplomas in Occupational Health or Medicine – has a current practising certificate – has experience in the type of health monitoring you need.	
Audiologists	Carry out hearing testing to diagnose noise induced hearing loss and can provide non-medical treatment of hearing loss.	Qualifications to look for: – Master of Audiology Degree and a Certificate of Clinical Competence.	A member of a professional association like: – New Zealand Audiological Society.
Human Factors Professionals/ Ergonomists	Provide a range of services, for example: – assessing worker exposure to biomechanical, physical, psychosocial and organisational/systemic factors – investigating problems such as workstation or task design, manual handling, fatigue, loss of vigilance and heavy or intense workloads – developing and testing design specifications for processes, plant, and equipment – evaluating the effectiveness of control measures – utilising systems analysis methods and processes for incident investigation and system design.	Qualifications to look for: – postgraduate qualifications in human factors or ergonomics. Certifications to look for: – Certified Professional Membership with HFSENZ or from an overseas equivalent society (for example, CIEHF (UK), HFSESA (Australia), BCPE (USA).	A member of a professional association like: – Human Factors and Ergonomics Society of New Zealand: www.hfesnz.org.nz – An equivalent overseas society (for example, HFESA (Australia), CIEHF (UK)). Also see if they have relevant competencies listed on the HASANZ Register: https://register.hasanz.org.nz

Appendix 9: Example of exposure monitoring information to give to workers

This is an example only. It is not intended to address specific circumstances of any particular individual or entity.

As you know, our work involves producing wood dust. Exposure to wood dust can cause skin rashes and breathing problems including asthma.

To check that you are not being exposed to levels of wood dust at potentially harmful levels, we will undertake exposure monitoring as described below. We pay for the exposure monitoring.

We will use the information gained from monitoring, and information from verification of control measures to continually improve how we are managing health risks to you.

The provider and the name of the person(s) who will carry out the testing

We-Measure-Exposure Ltd, Anne or Andrew (Occupational Hygienists)

Description of the monitoring

This will involve an Occupational Hygienist asking you to wear a small pump on your waist that is connected by a tube to a sampling head device, which is clipped onto your collar.

This device will measure levels of wood dust. You will be required to wear the sampling equipment for the whole shift and carry out your work duties as usual.

There are no health or safety risks or side effects to you from wearing this device.

The Occupational Hygienist will be around the workplace to observe your job tasks and may ask you questions about the job. This will help them to interpret results.

At the end of the shift, the Occupational Hygienist will collect the sampling equipment from you. After which, the samples will be sent to a laboratory to be analysed. The Occupational Hygienist will then write a report of the health risks.

All workers will get access to the report's results.

The report provided to workers will not contain any identifiable information. However individuals will be advised which monitoring results are their own.

From the report, control measures to manage health risks may be implemented, if necessary.

How often the monitoring will take place

The initial monitoring will take place during 13–17 July.

Based on the results and recommendations of the report, further monitoring may take place soon after the initial assessment (for example, every 6 months, 1 year, or 2 years).

Please note:

- The monitoring **does not record voice conversations or any personal health data** – it only records the levels of wood dust.
- The monitoring provider will be given the following information about you: shift times, job title, and work area(s). In addition they will be provided previous monitoring results, and risk assessments.
- The monitoring report will have the following information:
  - details of the monitoring (who, when, where, how, how often)
  - monitoring results (for each worker and averages)
  - potential health effects from exposure to wood dust
  - recommendations about managing any health risks.
- You will be offered a copy of the monitoring results as soon as possible after we receive them. We will discuss with you how these results compare to the results from past monitoring you have taken part in, and any implications.
- All workers will be given access to all monitoring results. **Note**: if there is any personal information, we will either ask your consent before the information is released or remove the identifiable information first. We will discuss with all workers how these results compare with previous monitoring results, and any implications.
- We will use monitoring results to improve how our health risks are managed including telling us when to review and improve the control measures. Only Mere (the Health and Safety Manager) will have access to the reports.
- The monitoring results (with any identifiable information removed) may be used for research purposes.
- All monitoring results are held by Mere. For previous monitoring results that relate to you, ask her for a copy.

Before the monitoring starts, Mere can meet with you to explain what the monitoring involves and answer any questions you have.

Appendix 10: Example of biological exposure monitoring information to give to workers

This is an example only. It is not intended to address specific circumstances of any particular individual or entity.

Request for workers to undergo biological exposure monitoring

As you know, our timber treatment work involves using CCA preservative (chromated copper arsenate). Exposure to CCA can cause skin rashes, neurological symptoms and breathing problems. In the long term, CCA can cause cancer (it is a carcinogen).

To check that you are not being exposed to levels of chromium and arsenic at potentially harmful levels, we request you undergo biological exposure monitoring as described below.

We will pay for the monitoring.

We will use the information gained from monitoring, and information from verification of control measures to continually improve how we are managing health risks to you.

The provider and the name of the person(s) who will carry out the testing

BioMon Consultants Ltd, Caroline or Mike

Description of the tests that will be carried out including known risks/ side effects

This will involve collecting a urine sample from you at the end of the work shift on the last day of the working week.

The monitoring provider will visit onsite and provide you a sample container. Once you have provided a urine sample, the provider will send the urine to DiagLabs for testing for levels of chromium and arsenic. **Your urine will not be used for any other purpose**.

There are no side effects to this testing.

When the monitoring will take place and how often

The monitoring provider will come and collect a urine sample from you (~3.45pm) on Friday 16 July.

Depending on the results, further testing may be required.

Where will the monitoring take place

At our work address.

Please note:

- You do not have to undergo biological exposure monitoring (it is voluntary).
- Biological exposure monitoring can only take place if you have provided your informed consent. You can change your mind and withdraw consent at any time.
- If you do not wish to give consent, let your manager know and we will consider what alternative arrangements may be made.
- Biological exposure monitoring will take place during normal work hours. We will fully cover the costs of the monitoring.
- The monitoring provider will be given:
  - details about you (your name or employee number), your role, the workplace and the work you carry out including the control measures in place
  - safety data sheets, and our risk register and assessments
  - previous monitoring results.
- The monitoring report will include:
  - details of the monitoring (who, when, where, how, how often)
  - any advice that you may have been exposed to potentially harmful levels of chromium or arsenic – it will not contain confidential information without your written consent
  - any recommendations to us and/or to you about next steps including medical referrals for further assessment.
- Your personal information will be kept confidential and stored in a secure location in the Health and Safety Manager's office. Only authorised people (currently the Health and Safety Manager) will have access to them.
- You will be offered a copy of your monitoring results as soon as possible after we receive them. We will discuss with you how these results compare to the results from past monitoring you have taken part in, and any implications.
- We will report back to all workers about the monitoring results. Note: if there is any personal information, we will either ask your written consent before the information is released or remove the identifiable information first. We will discuss with all workers how these results compare with previous monitoring results, and any implications.
- We will use monitoring results to improve how our health risks are managed including telling us when to review and improve the control measures.
- Your monitoring results may be used for research purposes – all your identifiable information will be removed before the information is released.

If you want, Mere can meet with you to explain what the monitoring involves and answer any questions you have.

Appendix 11: Example of health monitoring information to give to workers

This is an example only of the information. It is not intended to address specific circumstances of any particular individual or entity.

Request for workers to undergo health monitoring

Noise can cause noise induced hearing loss. To check how well we are managing noise in our workshop, we request that you undergo hearing tests as described below.

Having regular hearing tests mean that we can detect early signs of hearing loss and improve the control measures we have in place to stop your hearing from deteriorating.

We will pay for the monitoring.

We will use the information gained from monitoring, and information from verification of control measures to continually improve how we are managing health risks.

The provider and the name of the person(s) who will carry out the testing

Be Well Consultants Ltd, Nikau or Jenny

Description of the medical tests that will be carried out including known risks/side effects

You will first undergo a screening test – this is a brief test (no more than 10 minutes). It involves listening to sounds through headphones.

If a problem is identified, a full diagnostic hearing test will then be carried out by an audiologist (takes around an hour) at a later date.

There are no known side effects to this testing.

How often the monitoring will take place

A baseline hearing test will be carried out as soon as possible after starting work.

Then a screening test will be done once a year.

The approximate time of the work day the monitoring will take place (for example, morning, afternoon)

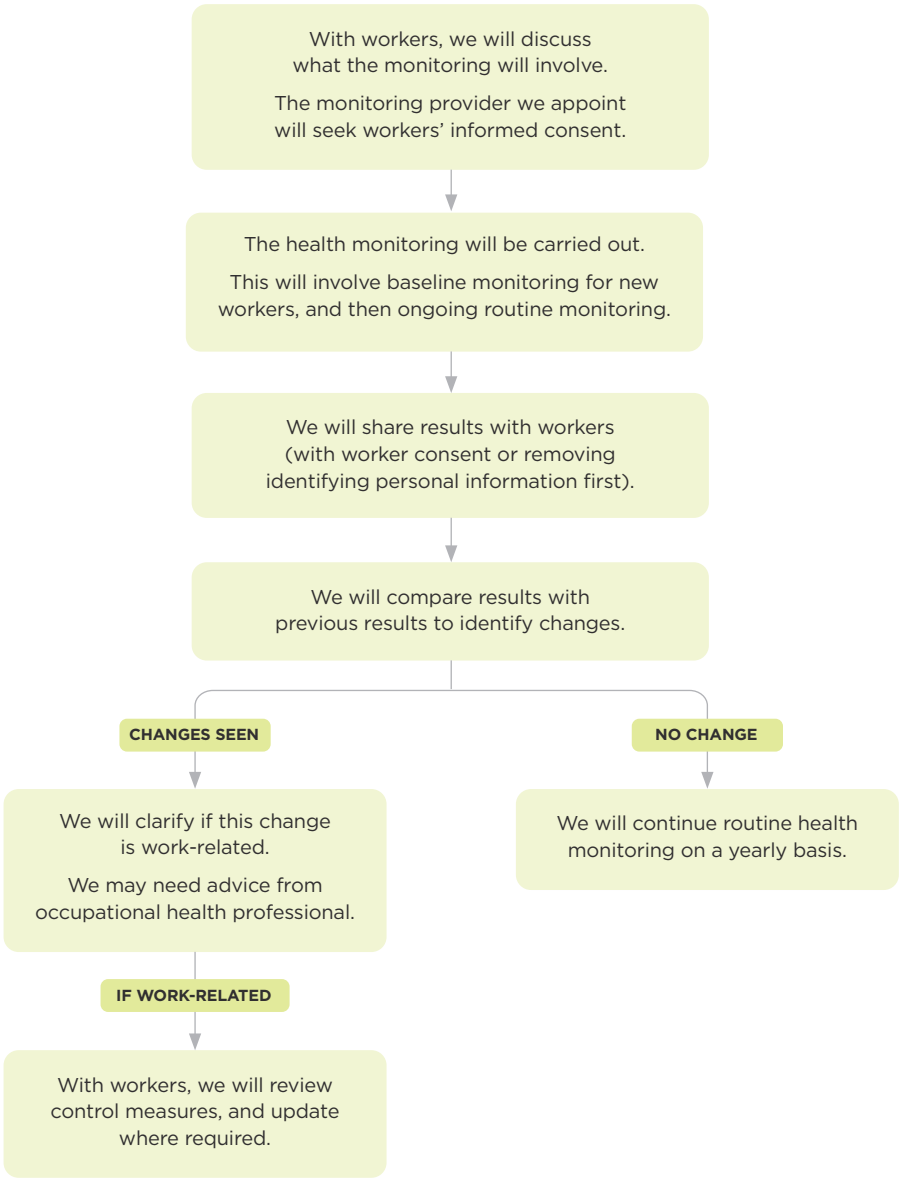
In the morning – during work time.

Where will the monitoring take place (if the monitoring is off-site, describe how the worker will get there and back)

At the Be Well Consultants Ltd offices.

A minibus will transport workers to the above offices and back to the worksite. Bob will coordinate this.

This is the process we will follow:



Please note:

- You do not have to undergo health monitoring (it is voluntary).
- Health monitoring can only take place if you have provided your informed consent. You can change your mind and withdraw consent at any time.
- If you do not wish to give consent, let your manager know and we will consider what alternative arrangements may be made.
- Health monitoring will take place during normal work hours. We will fully cover the costs of the health monitoring – including any transport costs.
- The monitoring provider will be given:
  - details about you (your name or employee number), your role, the workplace and the work you carry out including the control measures in place
  - safety data sheets, and our risk register and assessments
  - previous monitoring results.

- The monitoring report will include:
  - details of the monitoring (who, when, where, how, how often)
  - any advice that you may have hearing loss that is due to work (and not due to an underlying medical condition) – it will not contain confidential information without your written consent
  - any recommendations to us and/or to you about next steps including medical referrals and if you are able to continue to carry out the work.
- Your personal information will be kept confidential and stored in a secure location in the Health and Safety Manager's office. Only authorised people (currently the Health and Safety Manager) will have access to it.
- You will be offered a copy of your monitoring results as soon as possible after we receive them. We will discuss with you how these results compare to the results from past monitoring you have taken part in, and any implications.
- We will report back to all workers about the monitoring results. Note: if there is any personal information, we will either ask your written consent before the information is released or remove the identifiable information first.
- We will use monitoring results to improve how our health risks are managed including telling us when to review and improve the control measures. We will discuss with all workers how to results compare with previous monitoring results, and any implications.
- Your monitoring results may be used for research purposes – all your identifiable information will be removed before the information is released.

If you want, Mere can meet with you to explain what the monitoring involves and answer any questions you have.

Appendix 12: Example of an audiometry health monitoring report

This is an example only. It is not intended to address specific circumstances of any particular individual or entity.

Dear Noel

This report and the attached summary table are the record of the audiometry I completed on 10 September. Workers were monitored for any changes to their health in relation to their exposure to excess noise at work.

Summary of the testing (please refer to the attached summary for details)

Five workers were seen for annual health monitoring.

The testing was carried out as per *AS/NZS 1269.4:2014 Occupational noise management – Part 4: Auditory assessment* including filling out the tester checklist.

The results:

- **No** workers had abnormal hearing tests.
- **No** workers require re-testing.

As all workers have been tested before, comparison was made between these tests and previous test results from last year and from the baseline.

Referrals completed

No workers were referred for further assessment of abnormal hearing.

Observations

There were no issues that impacted on the testing.

Health and safety issues

All workers were advised on the importance of maintaining and wearing the correct* personal protective equipment (PPE).

PPE was inspected and found to be in good condition.

Recommendations

- Continue with current health monitoring programme.
- Continue to provide training and education to workers on the correct use and maintenance of their PPE.
- Make sure workers are given a full explanation of the health hazards involved in their work.

Individual reports are attached for each worker. Please note individual reports are confidential to each individual.

We will be in touch to arrange a suitable date for the next round of testing.

Thank you for your assistance while I was on site. Please do not hesitate to contact me if you have any further questions.

Yours sincerely
Caroline
Be Well Consultants Ltd

* This is the hearing protection that an Occupational Hygienist recommended each worker use in July 2020.

Health monitoring summary for Noel Ltd

Date of testing: 10 February 2021
Equipment used: Audiometer make/model: xx-x-xx-x
Calibration due: March 2021

Identifying criteria for results/comments

General terms:	Audio terms:
Normal – results within normal values Abnormal – results outside of normal values Unchanged – abnormal but results remain the same Referred health practitioner – with copy of results No previous notes – abnormal, no previous records available to compare	Normal hearing – within normal values NIHL = noise induced hearing loss Historic NIHL – long term pre-existing loss – unchanged Pattern NIHL – showing pattern NIHL Notifiable deterioration NIHL – 15dB since baseline

NUMBER	NAME	ROLE TITLE	RESULTS	COMMENTS/ACTION
1	Charlotte	Workshop supervisor	Normal hearing	No further action required
2	William	Machine operator	Normal hearing	No further action required
3	Emily	Machine operator	Normal hearing	No further action required
4	Jack	Machine operator	Normal hearing	No further action required
5	Olivia	Apprentice	Normal hearing	No further action required

Appendix 13: Example of a health and safety dashboard

Health and safety dashboard for XYZ Limited (2020)

CURRENT AREA OF FOCUS

PERFORMANCE MEASURE	2019	COMMENT
Number of notifications to WorkSafe	1	This was when a worker suffered a serious burn that required hospital admission. Control measures were reviewed and updated to identify the cause of the injury and to prevent recurrence.
Number of health and safety concerns raised by workers	10	Those concerns marked 'urgent' were reviewed within one hour of being received. All other concerns were reviewed within five working days.
Number of emergency plan drills	2	Fire alarm evacuations were completed within a satisfactory time. However some workers needed a reminder to not carry hot drinks on the stairs.
Percentage of new employee agreements and contracts for workers for whom monitoring is indicated that include participation in monitoring programmes	100%	From July 2018, all relevant employment agreements and contracts have monitoring participation included. This is an improvement as previously no employment agreements/contracts had a monitoring participation clause.
Percentage of exposure monitoring tests that exceeded the set standard	12%	Within 10 days of receiving a monitoring report advising of excessive worker exposure, control measures were reviewed and updated to reduce exposure below the set standard.
Percentage of required workers taking part in biological exposure monitoring programmes	100%	This is a significant improvement to the 2019 result and possibly due to our ongoing discussions with workers about the importance of the monitoring programme and their input into the selection of the monitoring provider.
Percentage of workers received flu vaccines (part of the well-being initiative)	70%	This is similar to previous years.
Percentage staff turnover	10%	This is similar to the 2019 result and an improvement on the 2018 result.
Percentage staff absence rate	5%	This is similar to the 2019 result and an improvement on the 2018 result.

PROGRESS ON INITIATIVES

INITIATIVE	PROGRESS
Improving worker participation	Three Health and Safety Representatives (HSRs) were elected by workers. The HSRs have undergone training. A regular meeting has been set up between HSRs and management.
Equipment and plant checks	All vehicles have current WOFs and have had recent services. Workers are now reminded to regularly check personal protective equipment (PPE) for wear and damage. There is a form to request new PPE. Workers are trained in how to use extraction ventilation and carry out daily checks to see if it is working properly.
Safer chemicals initiative	Last year we pledged to look at all the chemicals we use and replace them with non-toxic or less toxic ones where possible. So far we have identified 10 chemicals that we could replace with much healthier and safer versions. These chemicals will be removed from our workplace and workers trained to use their replacements within the next month. We expect to complete the review of all chemicals by the end of 2021.

Disclaimer

This publication provides general guidance. It is not possible for WorkSafe to address every situation that could occur in every workplace. This means that you will need to think about this guidance and how to apply it to your particular circumstances.

WorkSafe regularly reviews and revises guidance to ensure that it is up-to-date. If you are reading a printed copy of this guidance, please check worksafe.govt.nz to confirm that your copy is the current version.

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