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Silica dust in the workplace / Ko e efu silika (silica) 'i he ngāue'anga

This guidance advises PCBUs of the risks of respirable crystalline silica dust and how to control them and protect their workers.

Ko e tohi fakahinohino ni 'oku ne fale'i 'a e tokotaha 'oku ne fakalele ha pisinisi pe ngāue'anga (PCBU) 'o fekau'aki mo e ngaahi fakatu'utāmaki 'e ala tupu mei efu silika (crystalline silica dust) pea mo hono tokanga'i ke malu'i 'a e kau ngāue mei ai.

Silicosis is a progressive and deadly disease that causes fibrosis of the lungs from the inhalation of respirable crystalline silica (RCS) dust.

As a PCBU, you have a duty to eliminate, or use controls to minimise worker exposure to the hazard of, and risks from, RCS dust.

Ko e mahaki ko e silikosi (silicosis) 'oku kamata māmālie 'o faka'au pē ke fakalalahi 'o tupu ai ha mate he 'oku ne fakatupu 'a e 'ile'ila mo patepate 'a e ma'ama'a 'i hono mānava'aki ki loto 'a e efu silika (respirable crystalline silica - RCS).

Ko e fatongia 'o e PCBU ko hono ta'ofi pe tokanga'i ke fakasi'isi'i 'a e efua RCS 'i he ngāue'anga 'o ne fakatupu ai ha fakatu'utāmaki ki he kau ngāue.

Respirable crystalline silica dust / Ko e efu RCS

Silica is a natural substance found in concrete, bricks, rocks, stone (including artificial or engineered stone found in composite kitchen benchtops), sand and clay. RCS dust is created when materials containing silica are cut, ground, drilled, sanded, polished or otherwise disturbed. RCS particles are extremely small; they can't always be seen with the naked eye.

Ko e silika (silica) 'oku 'i he sima, piliki, maka ('o kau ai 'a e ngaahi fa'ahinga maka-ngaohi hangē ko ia 'oku teuteu'i'aki 'a e hilifaki'anga me'a (benchtop) 'i he ngaohi'anga kai), 'one'one pea mo e 'umea foki. 'Oku fakatupu 'a e efu silika (RCS) mei hono kilisi, tu'usi, vili, momosi, oloolo pe fakangingila 'o e ngaahi me'a ko ia. Ko e efu ni 'oku fu'u momoiki fau 'o 'ikai lava ke 'asi ia ki he sio 'a e mata.

How workers can be exposed to RCS dust / Ko e ngaahi ngāue'anga 'oku lahi ai 'a e efu RCS

Workers in the following industries or who work with the following materials are most at risk of being exposed to RCS dust:

- quarrying
- roading
- foundries
- construction: concrete, stone, bricks, mortar, fibre cement products
- manufacturing of concrete, bricks and tiles
- kitchen benchtop manufacturing (natural and engineered stone), finishing and fitting
- abrasive blasting
- monumental masonry work
- mining
- concrete drilling, cutting, grinding, fettling, mixing, handling, dry shovelling, tunnelling.

Ko e ngaahi ngāue'anga eni pea mo e ngaahi naunau 'oku lahi ange ai 'a e efu RCS 'o ala hoko ai e ngaahi fakatu'utāmaki:

- keli'anga maka
- ngāue mo ngaahi hala pule'anga
- ngaahi fale haka ukamea
- ngāue langa: sima, maka, piliki, palasitā sima, papa sima kehekehe
- ngaohi'anga sima, piliki mo e taila
- ngaohi'anga 'o e maka hilifaki'anga me'a 'i loki ngaohi kai (benchtop) 'a ia ko e fa'ahinga maka-ngaohi (engineered stone) pea mo e maka hangatonu (natural stone) pe
- ngāue'aki 'o e me'afana 'ea (mahafu'aki e 'one'one)
- ngaohi'anga maka fakamanatu
- keli koloa mei lalofonua
- tutu'u mo villi'i ha lau'isima, fahi, momosi, hu'i, heu sima mōmoa pea mo keli tafu (tunneling).

Health effects of exposure to RCS dust / Ko e uesia 'o e mo'ui 'e he efu RCS

Workers may develop the following lung diseases from breathing in RCS dust:

- **Silicosis:** scarring of lung tissue resulting in shortness of breath. May continue to develop even after exposure to RCS dust has stopped. **The effects of silicosis are permanent.** There are three types of silicosis:
 - **acute silicosis:** may occur after exposure of less than a year to very large amounts of RCS dust
 - **accelerated silicosis:** may occur after exposure to large amounts of RCS dust over a shorter period of time, typically 3 to 10 years. Has been seen in workers from the artificial/engineered stone kitchen benchtop industry
 - **chronic silicosis:** typically results from exposure to RCS dust over more than 20 years.
- **Lung cancer:** may occur in workers exposed to high levels of RCS dust over a long period of time.
- **Chronic obstructive pulmonary disease (COPD):** a chronic lung condition that can lead to breathing difficulties such as emphysema in workers exposed to high levels of RCS dust over a long period of time.

There is some evidence that exposure to RCS dust may also cause kidney disease.

'E lava ke puke 'a e kau ngāue 'i he ngaahi mahaki ko'eni 'o e ma'ama'a koe'uhi ko 'enau mānava'aki 'a e efu RCS:

- **Silikosi (Silicosis):** 'ile'ila pe patepate 'a e ma'ama'a 'o tupu ai 'a e nounou 'a e mānava. 'E ala ke kei hoko 'o fakalalahi neongo kuo 'ikai ke kei ngāue he efu RCS. **Ko e maumau 'oku fakatupu 'e he mahaki silikosi (silicosis) 'oku 'ikai lava ke toe liliu.** 'Oku 3 'a e fa'ahinga 'o e silikosi:
 - **silikosi fakatu'upakē (acute silicosis):** 'e lava ke hoko eni kapau ko e tokotaha ni na'e 'i he feitu'u efua RCS lahi 'aupito 'o si'i hifo he ta'u 'e taha

- **silikosi fakalalahi (accelerated silicosis):** 'e lava ke hoko eni kapau ko e tokotaha ni na'e 'i ha feitu'u efua RCS lahi 'aupito 'o hangē ko e ta'u 'e 3 ki he 10. 'Oku 'asi eni he kau ngāue 'o e ngāue'anga 'oku nau ngaohi 'a e maka hilifaki'anga me'a (benchtop) he ngaohi'anga kai.
- **silikosi kuo tōtu'a (chronic silicosis):** 'e lava ke hoko eni kapau ko e tokotaha ni na'e 'i ha feitu'u efua RCS 'o laka hake he ta'u 'e 20.
- **Kanisā e ma'ama'a:** 'e ala ma'u 'e he kau ngāue 'oku nau ngāue he feitu'u efua RCS lahi pea fuoloa 'aupito.
- **Ko e mahaki fakatu'utāmaki 'o e ma'ama'a. Chronic obstructive pulmonary disease (COPD):** ko e tu'unga fakatu'utāmaki ki he ma'ama'a 'i he fuoloa 'a e faingata'a'ia 'a e mānava 'o hangē ko e 'emifesima (emphysema) 'i he kau ngāue kuo fuoloa 'aupito 'enua ngāue he ngāue'anga lahi 'e ne efua RCS.

'Oku 'asi mai e ngaahi fakamo'oni 'oku lava ke fakatupu 'e he efua RCS 'a e mahaki'ia 'a e kofuua.

Your responsibilities as a PCBU / Ko e fatongia 'o e tokotaha 'oku ne fakalele ha pisinisi pe ngāue'anga (PCBU)

As a PCBU, you **must** ensure the health and safety of workers and that others are not put at risk from your work.

Before starting work using artificial/engineered stone, you must complete a risk assessment and review your controls.

You **must** eliminate risks that arise from your work so far as is reasonably practicable.¹

- When deciding how (control measures) to eliminate or minimise risks, you must identify when work tasks may create RCS dust.
- Give preference to effective control measures that protect many workers at the same time.
- Talk to your workers to get their views on which control measures to use.

Ko e PCBU kotoa pē **kuo pau** ke nau fakapapau'i 'oku 'ikai ke uesia 'a e mo'ui pea ke faka'ehi'ehi 'a e kau ngāue mei he fakatu'utāmaki he ngāue'anga, pea mo ha ni'ihiki kehe mei he ngāue 'oku fai.

Kimu'a pea toki kamata ho'o ngāue'aki ha maka-ngaohi (artificial/engineered stone), kuo pau ke ke fuofua vakai'i 'a e founa 'oku ke pule'i mo fakalele'aki 'a e ngāue pea mo e ngaahi fakatu'utāmaki 'e ala hoko ai.

Kuo pau ke ke fakahoko e ngaahi ngāue kotoa pē te ke ala fai 'o tuha mo taau ke to'o atu mei he ngāue'anga ha tupu'anga 'o ha ngaahi fakatu'utāmaki 'e ala hoko ai.¹

- 'I hono fakakaukau'i 'o e ngaahi me'a ke fai (ngaahi tu'utu'uni ke fakahoko), kuo pau ke ke 'ilo'i 'a e ngaahi ngāue 'oku nau fakatupu 'a e efu RCS.
- Ke fakamu'omu'a mo fuofua fakahoko 'a e founa ngāue te ne malu'i fakakātoa mo fakalukufua ange ai 'a e tokolahi 'o e kau ngāue.
- Talanoa pea ke fai ha femahino'aki mo ho'o kau ngāue ke 'ilo'i 'a e ngaahi founa malu'i ke fakahoko.

To eliminate RCS / Ke lava 'o to'o/ta'ofi 'a e efu RCS mei he ngāue'anga

- Use alternative products (eg metallic shot, slag products or grit instead of sand for abrasive blasting).

If you can't eliminate risks, you must **minimise** them so far as is reasonably practicable.

- Tuku 'a hono fakamahafu'aki 'a e me'afana 'ea 'aki e 'one'one kae ngāue'aki ha mahafu ukamea (metallic shot), pe ko ha penu fakatafe (slag pe ko e grit) mei he haka ukamea.

Kapau 'oku 'ikai lava ke to'o atu kotoa pe ta'ofi 'a e tupu'anga 'o e mahamahaki mei he efu, kuo pau ke ke **fakasi'isi'i** 'aupito 'a e hoko e ngaahi me'a ni.

¹ 'So far as is reasonably practicable' means you first consider what is possible in your circumstances to ensure health and safety. You then consider what is reasonable to do in your circumstances. You need to achieve a result that provides the highest protection that is reasonably practicable in the circumstances.

¹ Ko e 'uhinga 'o e lea "tuha mo taau" 'i hono ngāue'aki heni ke ke fuofua vakai'i pe ko e hā e ngaahi me'a 'oku tuha ke fai ke malu'i 'aki 'a e mo'ui 'a e kau ngāue. Pea ke toki vakai'i 'a e me'a 'oku taau ke ke fakahoko. 'Oku fiema'u ke ke ma'u ha ola 'oku malu'i mo hao 'aupito taha ai 'a e kau ngāue 'o makatu'unga 'i he founa 'oku ke malava 'o fakahoko.

To minimise exposure to RCS dust / Ke lava 'o fakasi'isi'i 'a e efua RCS

Instead of using engineered stone, use materials with a lower silica content. Engineered stone has approximately 90% silica compared with natural stone like marble and limestone which have around 2% silica. For more information about managing risk, see: [worksafe.govt.nz](https://www.worksafe.govt.nz)

Liliu mei hono ngāue'aki 'o e fa'ahinga maka-ngaohi (engineered stone) ki ha maka 'oku si'isi'i ange 'a hono efu 'oku si'isi'i ai 'a e silika. 'Oku meimei peseti 'e 90 'a e silika 'oku 'i he maka-ngaohi, ke 'oku pēseti pē 'e 2 'a e maka māpele ia mo e ngaahi maka lahe (limestone). 'Oku 'oatu 'a e tākaki ki he ngaahi fakahinohino ki hono fakasi'isi'i 'a e fakatu'utāmaki 'e ala hoko 'i he uepisaiti: [worksafe.govt.nz](https://www.worksafe.govt.nz)

WET-WORKING CONTROL MEASURES / KO E FOUNGA KE NGAUE'AKI E VAI

Freshly exposed silica particle surfaces (created due to grinding, drilling, cutting etc) are more toxic than older weathered particle surfaces. Using water to suppress dust has the added benefit of speeding up the weathering process.

'Oku kona ange 'a e efu silika 'oku toki fakatupu fo'ou mei hono vili, ooloo, tutu'u ha konga maka fo'ou 'i hono fakafehoanaki mo efu silika 'o ha konga maka 'oku motu'a. Ko hono ngāue'aki 'a e vai ke fakasi'isi'i 'a e efua 'oku to e tokoni foki mo ia ke toe motu'a vave ange ai 'a e maka.

| DO | DON'T |
|---|---|
| Use water spray or misting systems to suppress dust. Keep the work material (eg concrete, engineered stone benchtops) wet while work is carried out on them (eg cutting, polishing, etc). Use on-tool water suppression systems to keep dust out of the air | Dry sweep work areas |
| Frequently hose down equipment and work areas with water | Use compressed air to blow away dust |
| FAI ENI | 'OUA 'E FAI ENI |
| Ngāue'aki 'a e fana vai pe ko e fakamao (misting systems) ke fakasi'isi'i 'a e efua. Fakaviviku 'a e naunau 'oku fai'aki 'a e ngāue (sima, maka-ngaohi) lolotonga 'a hono ngāue'aki (hangē ko hono tutu'u pe fakangingila mo e alā me'a pehē). Ngāue'aki 'a e naunau fakaviviku 'oku 'osi fokotu'u ki he me'angāue koe'uhi ke 'oua 'e efua 'a e 'ea | Tafi 'a e efu 'oku kei mōmoa |
| Toutou fufulu'aki ha vai 'a e me'angāue pea mo e feitu'u 'oku fai ai 'a e ngāue | Ngāue'aki 'a e me'afana 'ea ke puhu 'aki ki tu'a 'a e efu |

DUST CONTROL MEASURES / KO HONO PULE'I 'A E EFUA

- Use physical barriers or computer numerical control (CNC) machines to isolate work areas or tasks that generate dust.
- When purchasing equipment and machinery, look for dust control features and dust collection systems. For example, tools used for cutting, grinding or polishing concrete and masonry should provide water to the blade and/or be fitted with an on-tool extraction system. See: [worksafe.govt.nz](https://www.worksafe.govt.nz)
- Ensure dust-generating equipment has a dust collection system with a filtered air supply to isolate the worker from the dust.
- Use an H-class HEPA-filtered vacuum cleaner in accordance with Standard AS60335-2-69. This includes when working at someone's home (eg to fit a bench). Workers should not use the household vacuum cleaner to remove dust.
- Seal dust waste bags and place them in the correct waste container.
- Ngāue'aki ha fakalokiloki pe ko ha mīsini vili mo tele fakakomipiuta (CNC) ke vahe'i 'aki 'a e feitu'u 'i he ngāue'anga 'oku ne fakatupu ha efua.
- Fakatau e ngaahi mīsini 'oku 'osi fokotu'u ki ai ha tākaki'anga efu pe ko ha me'a ke ne fakasi'isi'i 'a e efua 'i hono ngāue'aki. 'O hangē ko eni; ko e ngaahi me'angāue 'oku ne tutu'u, ooloo mo fakangingila ha sima pe ko ha maka, 'oku totonu ke fakaviviku 'a e mata pe ke fokotu'u ha tākaki'anga efu ki he me'angāue ko ia. Vakai ki he: [worksafe.govt.nz](https://www.worksafe.govt.nz)
- Fakapapau'i 'oku 'i ai ha tākaki'anga efu 'i he me'angāue 'oku ne fakatupu 'a e efua pea mo ha me'asivi 'o e 'ea ke malu'i'aki 'a e tokotaha ngāue.

- Faka'aonga'i 'a e fa'ahinga me'angāue komo 'oku H-class HEPA-filtered vacuum cleaner 'o fakatatau ki he tu'utu'uni 'a e Standard AS60335-2-69. Pea ke kau ki heni 'a hono ngāue'aki e me'angāue ni 'i he ngaahi 'api 'oku fokotu'u ai ha hilifaki'anga (benchtop). 'Oku 'ikai totonu ke ngāue'aki 'e he kau ngāue 'a e me'a komo (vacuum cleaner) ke to'o'aki ha efu.
- Tāpuni malu 'a e fa'o'anga efu pea ke fa'o ia he tākaki'anga totonu.

ADMINISTRATIVE CONTROL MEASURES / KO HONO FAKAHOKO E NGAahi TU'UTU'UNI

- Set up exclusion zones with signs to mark the boundaries of work areas where RCS dust is created. The signs should warn workers about the hazards and specify the PPE to be used.
- Schedule potential high-exposure work for times when there are fewer workers and others around (eg breaks or after normal working hours).
- Vahe'i pea faka'ilonga'i ke mahino 'a e feitu'u 'oku fai ai ha ngāue 'oku ne fakatupu ha efu RCS. 'Oku totonu ke 'asi he ngaahi faka'ilonga 'a e fakatokanga ki he kau ngāue 'a e nunu'a pea mo e me'angāue 'oku totonu ke fai'aki 'a e ngāue.
- Fai 'a e ngaahi ngāue 'oku ne fakatupu 'a e efua lahi taha ke toki fakahoko ia 'i he taimi 'oku tokosi'i tahas ai 'a e ngāue'anga ('o hangē ko e taimi mālōlō ai 'a e ngāue).

PERSONAL PROTECTIVE EQUIPMENT (PPE) / KO E NGAahi ME'ANGAUE MALU'I (PPE) FAKAFO'ITUITUI KE FAI'AKI 'A HONO MALU'I 'O E KAU NGĀUE (PPE)

- **PPE is the least effective control measure. It should not be the first or only control measure you consider.**
- PCBUs must provide PPE to workers unless another PCBU provides it or the worker genuinely and voluntarily chooses to provide their own PPE (and you are satisfied it is suitable).
- Seek expert advice when choosing PPE and consult with the workers who will be using it.
- **Ko e PPE 'oku 'ikai ko ha me'angāue ia 'oku ne malava lelei ke malu'i 'a e tokotaha ngāue. Pea 'oku 'ikai tonu ke hoko ia ko e fuofua me'angāue te ke ngāue'aki 'i hono fai 'o e malu'i.**
- Kuo pau ke 'oange 'e he PCBU 'a e PPE ki he kau ngāue tukukehe kapau 'oku 'osi fai ia 'e he PCBU makehe pe 'oku loto mo tali lelei pē 'e he tokotaha ngāue ia ke ne kumi ha'a ne PPE 'iate ia pē (pea ke fakapapau'i 'oku tuha e me'angāue ko ia).
- Kumi ke ma'u ha fale'i mei ha mataotao pea toki kumi ha PPE pea ke fai ha femahino'aki mo e kau ngāue te nau ngāue'aki.

Respiratory (breathing) protection / Me'angāue malu'i 'o e mānava

- A respirator may be half-face, full-face or a Powered Air Purifying Respirator (PAPR) (see pictures below). The type of respirator you choose will depend on the job and the levels of toxicity and concentration of RCS. Always choose a respirator that fully protects the worker, conforms with AS/NZS 1716 and is selected in accordance with Standard AS/NZS 1715.
- Carry out fit testing for each worker who will wear a respirator that requires a seal against the face.
- Provide information, training and instruction so workers can correctly use, wear, store and maintain their PPE.
- Ko e me'amalu'i (respirator) 'e lava ke ne 'ufi'uhi ha kongā pe ko e kātoa 'o e mata 'o e tokotaha ngāue pe ko ha me'amanava 'uhila (PAPR - power air purifying respirator). Vakai ki he fakatātā 'i lalo. Ko e me'amalu'i mānava te ke fili 'e makatu'unga ia 'i he ngāue ke fai pea mo hono lahi 'o e efu pea mo hono kona 'o e RCS ko ia. Fili ma'u pē 'a e malu'i mānava 'oku ne malu'i lelei 'a e tokotaha ngāue pea hangē ko ia 'oku tu'utu'uni 'e he AS/NZS 1716 pea ke fili ia 'o fakatatau ki he tu'utu'uni Standard AS/NZS 1715.
- 'Ahi'ahi'i 'a e hono tui 'o e malu'i mānava ki he tokotaha ngāue ko ia te ne ngāue'aki 'o lava ai ke hao lelei mo malu'i hono mata.
- Fakamatala'i lelei mo fakahinohino lelei ke 'ilo 'e he kau ngāue 'a e founa totonu ke tui, ngāue'aki mo tauhi ke malu 'a e 'enau me'angāue PPE.



FIGURE 1:
Re-usable half-face respirator (cartridge)

FAKATĀTĀ 1:
Ko e me'amānava 'oku fakakonga pē 'a 'ene 'ufi'uhi 'o e mata



FIGURE 2:
Full-face respirator (cartridge)

FAKATĀTĀ 2:
Ko e me'amānava 'oku ne 'ufi'ufi kotoa 'a e mata



FIGURE 3:
Full-face powered respirator (cartridge)

FAKATĀTĀ 3:
Ko e me'amānava 'uhila 'oku ne 'ufi'ufi kotoa 'a e mata

Protective clothing and cleanliness / Teunga malu'i mo hono tauhi ke mā'a.

- Ensure workers have overalls and gloves to wear at work. Workers should leave their dust-covered clothes at work to be cleaned. They should not wear them home.
- Ensure workers understand the importance of washing their hands before eating, drinking and smoking, and of washing up before they go home at the end of the day.
- Ensure washing facilities are provided.
- Fakapapau'i 'oku 'i ai ha 'ovalolo mo ha kofunima 'oku nau ngāue'aki ia he ngāue'anga. 'Oku totonu ke tuku 'a e ngaahi teunga 'oku efua 'i he 'apingaue ke fakama'a. 'Oku totonu ke 'oua na'a nau tui ki 'api.
- Fakapapau'i 'oku 'ilo 'e he kau ngāue 'a e mahu'inga 'o hono fanofano honau nima kimu'a pea nau toki kai, inu mo ifi tapaka pea ke nau fanofano kimu'a pea nau toki foki ki 'api he tuku 'a e ngāue.
- Fakapapau'i 'oku 'i ai ha feitu'u ke nau fanofano mo fakama'a ai.

Exposure monitoring / Ko hono vakai'i ma'u pē ke 'ilo 'a e lahi 'o e efua

Exposure monitoring involves measuring and evaluating workers' exposure to a health hazard. It includes monitoring workplace conditions as well as biological monitoring.

- As a PCBU you **must**, so far as is reasonably practicable, monitor workplace conditions if exposure to a particular health risk warrants it.
- Exposure monitoring will confirm whether workers are exposed to RCS dust at potentially harmful levels and if your control measures are working properly.
- Exposure monitoring does not replace the need for control measures.
- You can engage an occupational hygienist from the New Zealand Occupational Hygiene Society: www.nzohs.org.nz or the Health and Safety Association of New Zealand (HASANZ) Register: <https://register.hasanz.org.nz> to measure RCS dust concentrations and help evaluate risks to worker health.
- Ask your workers for their views when making decisions about exposure monitoring.

Ko e exposure monitoring ko hono vakai'i ke 'ilo'i 'a e lahi 'o e efua 'a e kau ngāue pea 'oku sivi mo vakai'i fakalelei 'a e ola 'o e ngaahi sivi ni. 'Oku kau ai 'a hono vakai'i lelei 'a e ngāue'anga pea mo hono toutou sivi'i 'a e sino 'o e kau ngāue (biological monitoring).

- Ko e PCBU kotoa pē **kuo pau**, ke nau vakai'i ma'u pē 'a e ngāue'anga, 'o fakatatau ki ha ngaahi me'a 'oku fiema'u ai ke fakahoko, pe 'oku 'i ai ha fa'ahinga me'a ai 'oku ne fakatupu ha fakatu'utāmaki ki he mo'ui.
- Ko hono toutou vakai'i fakalelei 'a e lahi 'o e efua 'a e ngāue'anga pea mo hono sivi 'o e kau ngāue, 'e fakamo'oni'i mei ai pe 'oku 'oku fakatu'utāmaki 'a e lahi 'o e efua pea mahino ai pe 'oku 'aonga 'a e founa 'oku malu'i 'aki kinautolu.
- Ko hono fai 'o e ngaahi sivi (exposure monitoring) 'oku 'ikai tonu ke tuku ai 'a hono feinga'i ke fakasi'isi'i 'a e efua.
- 'E lava ke ke ngāue'aki ha tokotaha ngāue (occupational hygienist) mei he NZ Occupational Hygiene

Society www.nzohs.org.nz pe ko e the Health and Safety Association of New Zealand (HASANZ) Register: <https://register.hasanz.org.nz> ke ne fua mo sivi 'a e lahi 'o ha efu RCS ke tokoni ki hono fakafuofua'i 'a e fakatu'utāmaki 'e ala hoko ki he kau ngāue.

- 'Eke ki he kau ngāue ke fai ha'a nau lau ki he ngaahi sivi 'oku lava ke fakahoko he ngāue'anga.

Health monitoring / Ko hono sivi'i mo vakai'i 'a e uesia 'o e mo'ui

Health monitoring involves testing workers to identify any changes in their health status because of exposure to hazards arising from their work.

- As a PCBU you must, so far as is reasonably practicable, monitor workers' health if exposure to a particular health risk warrants it.
- Provide health monitoring for all your workers who may be exposed to RCS dust. You can engage an occupational health practitioner from the New Zealand Occupational Health Nurses' Association: www.nzohna.org.nz from the HASANZ Register, and/or the Australian and New Zealand Society of Occupational Medicine: <https://anzsom.org.nz> to perform health monitoring.
- Monitoring should include:
 - collection of workers' demographic, medical and occupational histories
 - records of workers' exposure
 - a respiratory questionnaire
 - respiratory function tests
 - in some cases, chest x-ray or other radiological procedure.
- You must have workers' consent before you monitor their health.
- Ask your workers for their views when making decisions about health monitoring.

Ko hono vakai'i 'o e uesia 'o e mo'ui 'oku fakahoko 'aki ia 'a hono sivi'i 'o e kau ngāue ke 'ilo'i ai ha ngaahi liliu 'oku hoko ki he 'enau mo'ui koe'uhi ko ha ngaahi me'a fakatupu fakatu'utāmaki (hazards) 'oku hoko he ngāue'anga.

- Ko e PCBU kotoa pē kuo pau ke nau sivi mo vakai'i 'aki 'i ha founa tuha mo taau, 'a e tūkunga 'o e mo'ui 'a 'enau kau ngāue 'o kapau 'oku ha mai 'oku 'i ai ha fakatu'utāmaki 'oku ala hoko he ngāue'anga.
- Ke nau sivi mo toutou vakai'i 'a e mo'ui 'a e kau ngāue kotoa pē 'oku nau 'i ha ngāue'anga 'oku 'i ai ha efu RCS ai. 'E lava ke ke ngāue'aki ha tokotaha ngāue (occupational health practitioner) mei he NZ Occupational Health Nurses' Association: www.nzohna.org.nz mei he HASANZ Register, pe ko e Australian and New Zealand Society of Occupational Medicine: <https://anzsom.org.nz> ke nau fai 'a e sivi 'o e kau ngāue.
- ko e sivi ke fai 'e fakakau ki ai 'a e:
 - tākaki 'o e fakamatala'i 'a e tūkunga taautaha 'o e tokotaha ngāue 'o kau ai 'a 'ene lekooti mo'ui lelei pea mo e hisitolia 'o 'ene ngaahi ngāue
 - hiki'i 'a e lahi 'o e efua 'a e kau ngāue
 - ko ha tali fehu'i 'o fekau'aki mo 'enau mānava
 - sivi ke 'ilo pe 'oku mo'ui lelei pē 'a e mānava 'a e sino
 - 'i he taimi ni'ihi 'e fiema'u ha faka'ata 'o e fatafata (chest ex-ray) mo ha ngaahi faka'ata kehe pē.
- Kuo pau ke ke fuofua ma'u ha ngofua mei he tokotaha ngāue pea ke toki lava 'o fakahoko 'a e sivi mo e vakai'i fakalelei.
- 'Eke ki he kau ngāue pe koe ha ha'a nau lau ki he tu'utu'uni ke fai hono sivi 'enau mo'ui lelei.

Health monitoring for workers exposed to engineered stone / Ko hono sivi mo vakai'i 'a e mo'ui 'a e kau ngāue'aki 'o e maka-ngaohi

Due to the serious risk of developing accelerated silicosis in those working with engineered stone, an Occupational Medicine Specialist should be engaged to provide health monitoring advice and services.

Koe'uhi 'e ala hoko ange ha puke 'i he mahaki silikosi fakalalahi (silicosis) ki he mo'ui 'a kinautolu 'oku nau ngāue'aki e maka-ngaohi, 'oku totonu ke faka'aonga'i ha Occupational Medicine Specialist ke ne fai 'a e sivi mo vakai'i lelei 'a e kau ngāue.

Training / Ako mo e fakahinohino

- As a PCBU you must, so far as is reasonably practicable, ensure workers are supervised or trained to work healthily and safely.
- Provide your workers with information, training and instruction on the control measures (including the use and care of PPE) and the potential health risks of wearing PPE. For more information, see: worksafe.govt.nz
- Ask your workers for their views when deciding how to provide information and training.
- Ko e PCBU kotoa pē kuo pau ke nau fakapapau'i 'i ha founa 'oku tuha mo taau, ke mapule'i mo ako'i 'a e kau ngāue ke nau ngāue 'i ha founa 'oku hao mo malu.
- 'Oange ki he kau ngāue ha ngaahi fakamatala mo e fakahinohino ki hono pule'i ke 'oua na'a hoko ha fakatu'utāmaki he ngāue'anga (control measures) 'o kau ai 'a hono ngaue'aki mo tokanga'i lelei 'a e PPE pea mo e ngaahi faingata'a'ia 'e ala hoko 'i hono ngāue'aki 'o e PPE. 'Oku 'oatu 'a e tānaki ki he ngaahi fakamatala ni 'i he: worksafe.govt.nz
- 'Eke ki ho'o kau ngāue ke nau 'oatu 'enau ngaahi fakakaukau ki he founa ke fai'aki 'a e ako pea mo e fakahinohino.

More information / Silikosi fakalalahi

Safety alert / Ko e fakatokanga

[Accelerated silicosis](#)

[Ko e fakalalahi 'o e mahaki silikosi \(accelerated silicosis\)](#)

Fact sheets / Lau'itohi Fakahinohino

[Controlling dust with on-tool extraction](#)

[Respiratory Protective Equipment – advice for PCBUs](#)

[Workplace Exposure Standards \(WES\)](#)

[HASANZ Register](#)

[NZOHS](#)

[NZOHNA](#)

[ANZSOM](#)

[Me'akomo efu 'oku 'osi fokotu'u he mīsini 'oku fai'aki e ngāue](#)

[Ko e naunau malu'i mānava – fale'i ma'ae PCBU](#)

[Ko e ngaahi tu'utu'uni ki he efua 'a e ngāue'anga \(Workplace Exposure Standards\)](#)

[HASANZ Register](#)

[NZOHS](#)

[NZOHNA](#)

[ANZSOM](#)