

# Newmont Tanami

## Independent Safety Investigation

For Newmont Mining Services Pty Ltd

Subject to legal professional privilege

Version 1  
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## 1. Introduction

Glasshouse Consulting (Glasshouse) was engaged by Newmont Mining Services Pty Ltd (ABN 22 008 087 778) to investigate allegations raised by Reece Ferrara, a contract paramedic engaged to provide services to the Newmont Tanami mine site in the Northern Territory. Mr Ferrara was engaged through Host Rescue, a third party employer, and was on site between 1 February and 13 February 2022.

Michael Heenan (Principal Consultant) conducted a site visit, to independently investigate the allegations, from Tuesday 22<sup>nd</sup> to Friday 25<sup>th</sup> February 2022.

## 2. Scope

The purpose of the investigation was to determine whether there is evidence to support the allegations made by Mr Ferrara.

The allegations fall into three broad categories:

1. That an injury, which presented on 7 February in the nature of blisters to the lower leg of a worker, was caused by exposure to a hazardous chemical, namely lime; and
2. That an illness, which presented on 10 February with symptoms including feeling light headed, diarrhoea and nausea, was caused by exposure to a hazardous chemical, thought to be cyanide; and
3. That this injury and illness, together with other injuries and/or illnesses over prior weeks, including two separate cases that presented on 12 February, are linked by a toxic event happening at Newmont Tanami.

## 3. Approach and Limitations

The findings from the investigation are based on a review of the allegations, other provided documentation, interviews and site inspections at both “The Granites” which is the site of the processing plant, and “DBS” which is the site of the mine. The two sites are situated in the Tanami desert, approximately 40km apart, and are collectively known as Newmont Tanami.

The facts outlined in the report are supported the by statements from the following persons interviewed:

1. Jacob Boscato, a maintainer employed by CSI at the Granites and the person who suffered the injury presented on 7 February;
2. Michael Hill, a surface electrician employed by Newmont at DBS and the person who suffered the illness on 12 February;
3. Dr Grant Townsend, an Occupational Physician employed by Occumed;
4. Jessica Simpson, a medical advisor employed by Newmont;
5. Teagan Emptage, a medical advisor employed by Newmont;
6. Sharyn Thacker, a Senior Metallurgist responsible for the on site laboratory at the Granites, employed by Newmont;
7. Sharna Thomas, an Occupational Hygienist employed by Newmont;
8. Grant Morrison, Mr Hill’s supervisor at DBS; and
9. Drew Wilson, Mr Boscato’s supervisor, employed by CSI.

No interview was conducted with Mr Ferrara. It is usual practice that an interview would be arranged with the complainant in any investigation.

However, in this case it is noted that Dr Townsend recommended that a formal psychiatric evaluation of Mr Ferrara be made prior to allowing him to return to duty. The author is not aware whether this evaluation has been completed. If it hasn't, then it is our view that there would be little value in an interview with the complainant.

The work has been undertaken and performed in a professional manner however is limited to general information in the opinion of the author. No other warranty, expressed or implied, is made. This report is solely for the use of the addressee and for the purpose set out in the report.

Furthermore, this investigation is not an audit of management systems or a determination of legal or WHS compliance.

## 4. Injury to Jacob Boscato

Mr Boscato is a maintainer working for CSI (Crusher Systems International) who contract to provide maintenance and other services to Newmont on site at Granites.

On the day of the injury, Mr Boscato had been "hosing up" in and around the crushing equipment. This is a routine task which he had performed many times before and which is performed by someone on site every day. He was wearing new gum boots.

There is no suggestion that the task was not done in accordance with the approved procedure, although further inquiry into that issue is beyond the scope of this investigation.

Mr Boscato says he began to feel a burning sensation during the first day he was wearing the boots but that the pain had resolved by that night, and he didn't think about it any further.

He noticed the same sensation the next day while he was undertaking the same activity and then he said the pain became a lot worse while he was inside the chute trying to clear a blockage. He says the temperature inside the chute was very hot and he could feel himself sweating profusely. After a short time he felt his leg burning again and when he had completed the work inside the chute he went over to the workshop and took his boots off and put some ice on his leg which seemed to help the pain. That night while in the mess he noticed a small blister had formed and in the morning he noticed he had two quite large blisters. He notified his supervisor and was taken to the medical room, where he was treated by Mr Ferrara.

For his part Mr Boscato has no complaints about the way he was treated. He felt he had received good care.

He wasn't aware of any exposure to chemicals which may cause a burn. He doesn't recall his calf being exposed to water or to material from the crushing equipment.

He says the only unusual feature of the work he was doing was that it was very humid, owing to the rain that had recently fallen on site, and it caused him to sweat profusely during the two days in question, and that he was wearing new gumboots he had never worn before.

There is no question that Mr Boscato was injured. Dr Townsend later described the injury as a superficial burn, which was no doubt painful. The appropriate action was taken in that Mr Boscato was removed from duty and sent home to recuperate. He subsequently received further treatment from his own GP.

The question to be answered is whether the injury was caused by a chemical exposure, and in particular lime.

### **Was there any chemical exposure?**

There is no evidence of any exposure to lime, or to any other chemical which might have caused the burn.

1. The injured person himself does not recall any situation over the course of the two days that the injury was thought to have developed where he may have been exposed to lime or a chemical. On the first day while he was hosing he says no water came into contact with his leg. On the second day when he was hosing and spent a brief period down the chute he says that no material or water came into contact with his leg. On both days he confirmed his socks and trousers were wet, but believed that it was caused by his own sweat owing to the humid conditions he was working in.
2. Sharyn Thacker did testing of:
  - a. the water being used for hosing, and
  - b. the water which had been puddling on the ground around the crushing equipment, and
  - c. the material which had fallen off the crushing equipment;

to determine whether there was any possible source of contamination in the water or material that Mr Boscato may have been exposed to without his direct knowledge.

No such markers of contamination were found by this testing.

The samples tested by Thacker had been collected by Drew Wilson, who was Mr Boscato's supervisor at all relevant times. The water samples were collected on 7 February. The samples of the material were taken on 11 February.

### **Credibility of Wilson and Thacker**

Drew Wilson is a shift supervisor employed by CSI and he impressed me as a straightforward, direct and honest person. After being advised of the incident, he said he took samples of water which had been puddling around the area that Boscato had been working, as well as around the sump area from which the hose water was taken. He also took samples of material in and around the crushing equipment a few days later on 11 February. I am satisfied that the samples were taken in good faith and in a genuine attempt to understand what may have caused the skin irritation, after it had been suggested by the medic that contaminated water may have been the cause.

Sharyn Thacker is an extremely experienced chemist employed by Newmont Tanami Operations and impressed me as a knowledgeable and practical person. Ms Thacker did the testing she was asked to do and presented the findings in a matter of fact way. Having met her and spent some time understanding her role and personality, I have no doubt that if she found anything concerning she would not hesitate to say so.



## The white “crust” which appears on the ground

There is a white crust which appears on the surface in and around the processing plant. It was suggested in material presented by Mr Ferrara that it was evidence of lime and/or chemical contamination on site.

Photos of this “crusting” appear below.

*Photo 4.1 crusting on access road*



*Photo 4.2 Crusting on pathway*



It is generally accepted on site that these are minerals and /or salts left behind by the raw water which is sprayed on the ground by trucks to suppress dust. The water is periodically tested to ensure it is safe. The raw water was tested as well immediately after the alarm was raised by Mr Ferrara about the potential lime exposure (see statement of Sharyn Thacker pp 16-18).

There is no reason to suspect that this white powder is unsafe. When specifically asked whether it was possible whether this could somehow cause skin irritation, the answer given by both Ms Thacker and by Sharna Thomas, the on-site occupational hygienist, was “no”.

In any event, even if this could cause skin irritation, an effective mitigant would be wearing appropriate PPE, which was worn by Mr Boscato in this case.

## The medical evidence

Dr Townsend advises he was informed by Mr Ferrara at the time that Mr Boscato had been working in knee deep water for hours at a time and that Ferrara’s working theory was that the water was contaminated and had caused the burn.

This is inconsistent with Mr Boscato’s statement of events. Mr Boscato specifically says he did not come into any contact with water and that the moisture at the bottom of his trousers and socks was caused by his own sweat.

When presented with Mr Boscato’s version of events, Dr Townsend’s view was that the blisters were more than likely caused by the new gumboots he was wearing, allied with the moisture caused by Mr Boscato’s sweat.

Dr Townsend advises that in cases such as this it is critical to investigate thoroughly what the patient had been doing leading up to the irritation, with a particular focus on anything different or out of the ordinary. In this case, the only new feature was the gumboots, although Mr Boscato says it was also unusually humid due to the (then) recent rains. The task Mr Boscato was engaged in ("hosing up") was one he had done many times before, and the water he was using was the same raw water that was always used (see statement of Sharyn Thacker paras 16-18).

## Conclusion

There is no evidence to support the allegation that Mr Boscato's injury was caused by exposure to lime or any other chemical:

1. Mr Boscato does not recall any such exposure
2. Testing done on the water used by Mr Boscato while hosing up and the material in and around the work area does not reveal any contaminants;
3. Mr Boscato was wearing the appropriate PPE. Ironically it appears the gumboots he wore are a potential source of the skin irritation (see statement of Dr Townsend para 14).

## 5. Illness to Mr Hill

Mr Hill presented to the medical room on the afternoon of 10 February feeling unwell.

There is no dispute that Mr Hill was in fact unwell. He was feeling lightheaded, had nausea and diarrhoea.

Mr Hill had that morning been ferrying 1000 litre pods of wastewater from the refrigeration plant at DBS to a remediation pond, using a forklift. The water had been pumped out of the plant and put into the pods following a spill which had happened a few weeks previously.

He reports that he had been given the task by his supervisor that morning. He saw it as a simple task. It was hot (over 40 degrees) and his intention was to get most of the job done in the morning to avoid the extreme heat in the early afternoon.

He was wearing the appropriate PPE for the task, including a mask. He said he had checked with the Refrigeration Technician (Joel Willshire) whether there was anything out of the ordinary in the water and Mr Willshire had told him there was nothing to worry about.

He says the job proceeded as planned. There were about 30 pods in total and the plan was to stage the disposal of the wastewater to around six pods per day and to see how the remediation facility could cope with the volume.

This plan has been confirmed by Grant Morrison, Mr Hill's supervisor at the relevant time.

Each time Mr Hill drove a pod to the remediation pond, placed the pod on the bund of the pond, released the valve at the bottom of the pod and then screwed open the top of the pod so that the water could flow out.

He says there were no issues with splashing of water as the pod was placed down low on the bund of the pond, and no issues with gas or fumes as he stayed upwind while unscrewing the top of the pod and stayed around 8 metres upwind of the pod while the water was being released. When the water stopped flowing he then came in and closed the valve, screwed the top back on and returned the pod.

*Photo 5.1 Pod showing release valve*



*Photo 5.2 Pod showing screw top*



*Photo 5.3 Bund (Lip) of remediation pond*



He says he did around three trips, had a break for morning tea and then took another three and then had another break for lunch.

About 40 mins after he broke for lunch he started feeling unwell. The onset of Mr Hill's symptoms are described in his statement. In summary he had difficulty eating his lunch, then started feeling lightheaded, vomited a small amount and followed that with an episode of diarrhoea. He was standing next to the air conditioner trying to cool down when his supervisor said to him something along the lines of "you don't look too good" and went with him to the medical room, where he was treated by Mr Ferrara.

At the time he thought he was dehydrated, having experienced dehydration before. He said he started feeling better soon after being in the cool of the medical room. He has no issues with the way he was treated and says he felt well looked after.

After staying overnight in the medical room he returned home the next day via Alice Springs. He was travelling with a work colleague and was picked up at Adelaide Airport by his wife. He says he took it easy over the weekend and saw his GP on the Tuesday and had some blood tests. Mr Hill says that his GP's view was that he had been dehydrated and that his recent bout of COVID may have exacerbated the symptoms of dehydration.

## Witnesses

### Jessica Simpson

Jessica Simpson is a paramedic that was on duty with Mr Ferrara at DBS. She was happy to let Mr Ferrara take care of Mr Hill when he came in, as she had other work to go on with and he was ready, eager and willing to do so.

Ms Simpson says that Mr Ferrara had just that morning completed the Cyanide Awareness course, which is an internal module available to contractors and employees to complete.

Mr Ferrara was not required to complete this module as part of his induction and Ms Simpson assumed he was doing it for his own interest.

Ms Simpson said that Mr Ferrara appeared convinced quite early that Mr Hill was suffering from cyanosis and asked her to check for "blueing" soon after Mr Hill presented at the clinic. Ms Simpson advises no blueing was present. Ms Simpson then found it odd that Mr Ferrara was fixated on Mr Hill's oxygen readings which in Ms Simpson's opinion had reached normal levels soon after Mr Hill started receiving oxygen inflows.

Ms Simpson however did not think Mr Hill's health was being threatened by the treatment he was receiving from Mr Ferrara and assumed that Mr Ferrara was acting under the direction of the doctor. She was also perhaps put off confronting Mr Ferrara further after her first interaction resulted in some petulant behaviour from Mr Ferrara. (See statement of Jessica Simpson para 34-35). She became concerned that Mr Hill was being force-fed a narrative around cyanide or ammonia exposure and that was when she asked Mr Morrison (Mr Hill's Supervisor) to come down and take an independent statement about what exactly Mr Hill had been doing leading up to feeling ill.

### Grant Morrison

Mr Morrison is Mr Hill's supervisor and directed Mr Hill's duties at all relevant times. He is a very experienced, having worked at the mine for nine years and knows Mr Hill very well having supervised him for around 2½ years.

He did not consider the duties assigned to Mr Hill particularly hazardous although he and Mr Hill talked through the task in some detail before he commenced. Mr Morrison says they knew there was a film of oil at the top of each pod and small amounts of ammonia but that the task was to decant the water until it reached the level of the oil and to return the pods with the oil in it and they would dispose of the oil at a later stage.

This was not the first time this task had been performed. While there were about 30 pods left by the time Mr Hill commenced, other workers had performed the task without incident for several days before this.

After he realised Mr Hill wasn't feeling well he escorted him down to the medical room.

After the shift finished he says he went down to the medical room to see how he was. He remembers Mr Ferrara telling him that Hill would have to stay overnight and that he may have cyanide poisoning. He remembers telling the medic that there wasn't any cyanide at DBS other than in trace amounts from tailings which is used to make 'paste' which is mixed with cement and water and used underground to fill in holes and/or voids underground. It is regularly tested and cyanide may be present but in undetectable amounts. In any event, Mr Morrison says that he explained to the medic that Mr Hill does not work underground and therefore would not be exposed to this "paste".

He remembers thinking Mr Hill looked much better and thought there was not much more he could do given Mr Hill was going to be there overnight under the care of the medics.

Mr Morrison was surprised to find out that Mr Hill was being flown out the next day and was forced to make some hasty arrangements for his travel.

### **Was there exposure to a hazardous chemical?**

Mr Hill says there was no splash back of the water that was being decanted as there was a suitable position on the bund (or lip) of the remediation site for release of the wastewater from the pod. He said he also stayed upwind as a precaution to prevent any inhalation as he unscrewed the top and as the water was emptied.

In any event, for any exposure to be the cause of the problem there would have to be some toxicity in the liquid. The liquid was tested and found to contain ammonia in very low amounts. The testing results for the liquid contained in the pods are in the statement of Sharna Walsh, the occupational hygienist on site. The results are not indicative of any toxicity.

### **Conclusion**

It follows that if Mr Hill says he was not exposed to the liquid (via contact or inhalation), and the liquid was tested and deemed to not be capable of causing illness via exposure, it can be reasonably concluded that his illness was unlikely to be caused by exposure to the liquid.

This can be placed in context with the statements of Ms Thompson and Dr Townsend (consulting Doctor), who both characterise the symptoms Mr Hill presented as non-specific and likely caused by dehydration, perhaps exacerbated by lingering effects of COVID. This is supported by Mr Hill's own GP who he consulted a few days later.

## **6. Events of 12 February**

Two patients presented to the clinic on the afternoon of Saturday 12 February. One presented with heat stress symptoms after working in the heat on a concrete slab on the first shift of his swing. The next patient presented with a sore throat and was there to request a Rapid Antigen Test (RAT) so that he could safely get on the bus back to the accommodation.

According to Teagan Emptage, a medical advisor who was working with Mr Ferrara at the time, Mr Ferrara was quick to conclude that both cases were linked to a toxic event that was happening on site. Ms Emptage says she was unaware of any toxic event happening on site and says that this conclusion was drawn prior to a patient assessment having been completed in each case.

Ms Emptage became alarmed at Mr Ferrara's behaviour during the afternoon, and specifically his fixation with oxygen readings and the toxic event he thought was happening on site. In her opinion he was unnecessarily causing distress to the patients who were (wrongly in her view) being told they had been exposed to hazardous chemicals. Mr Ferrara's behaviour progressed to the point where it was compromising her ability to treat the patients that were presenting to the clinic and she rang Brett Pascoe to ask for assistance.

Mr Ferrara spoke to Dr Townsend several times during the afternoon. Dr Townsend also grew increasingly alarmed at the nature of the conversations he was having and finally asked Mr Ferrara if he was alone and when Mr Ferrara confirmed that Ms Emptage was also present, asked to speak to Ms Emptage. Dr Townsend was able to confirm his own diagnosis with Ms Emptage that the first patient was suffering from heat stress and at that point Dr Townsend decided that Mr Ferrara was operating in an unsafe manner and took steps to have him removed from duty.

Mr Pascoe arrived soon after with a security officer and took Mr Ferrara to his accommodation.

Dr Townsend subsequently recommended that Mr Ferrara undergo a formal psychiatric evaluation prior to returning to duty.

## 7. The 'Cluster' claim

It follows that if there is no evidence of any of the patients seen by Mr Ferrara falling ill or being injured as a result of exposure to hazardous chemicals, then there cannot be a cluster of cases caused by a toxic event.

Mr Ferrara also indicated he believed there had been other recent cases of illness and/or injury caused by exposure to chemicals. No such cases exist based on a review of the available evidence (see statement of Teagan Emptage paras 46-51).

## 8. Use of cyanide at the plant

The use, management, storage and disposal of Cyanide is detailed in the "The Granites Major Hazard Facility Safety Case MLS8".

Cyanide is used in the process of extracting gold from the material mined at DBS, 40km away.

This extraction process takes place in what is colloquially known as the "gold room" at the processing plant at the Granites.

The Granites processing plant has in place a Cyanide Management Plan to ensure that there are systems in place to manage cyanide and that the site is following applicable laws, regulations, and the International Cyanide Management code.

Risks associated with cyanide handling and storage are managed in accordance with the Newmont's Global Fatality Risk Standards. I note that the operational risk assessment for Cyanide Handling and Storage went through a process of review as recently as 9 February 2022.

Tailings are placed in the tailings dam, which is close by the processing facility. Tailings are required to be treated such that the tailings dam is safe for wildlife to drink from.

No significant breaches of the various processes have been reported at the Granites in recent history, certainly none that may have caused injuries at the mine 40 km away within the last month.

## 9. Use of lime at the Granites

Sharyn Thacker explained the use of lime at the Granites in her statement, paragraphs 6-9:

6. *There have been no incidents that I am aware of since I started working here of lime exposure. The lime in use at our processing facility is delivered into a sealed lime silo and the lime is discharged onto a conveyor belt through an enclosed chute and the mine material is then placed on top of the lime and fully covers it. I have never seen nor do I think it is possible that lime or lime dust would ever escape, assuming the equipment was not faulty or broken.*
7. *At previous sites I have worked at the lime is placed on top of the mine material and/or the chute is unsealed so it is possible that lime dust might escape.*
8. *I have never seen lime dust escape from the process in use at our facility. No incident where lime or lime dust has escaped has ever been reported to me.*
9. *This process happens after the rock from the mine is crushed so in any event the lime would not be present in the rock which might fall from the crusher that is operated by CSI.*

The lime is only added to the process after the ore has completed the crushing process. Mr Boscato, the worker alleged to have been burned by lime exposure, was working in the crushing plant and not in the area in and around the lime silo and chute.

While the lime chute shown is not a long distance away from the area that the worker was hosing in, any possible contamination of lime is excluded by the testing which was done to the groundwater and to the material in and around the crushing facility. It is also worth noting that the worker was wearing the appropriate PP the usual control measure adopted when seeking to exclude the possibility of exposure.

## 10. Conclusion

The medical witnesses provided no support for Mr Ferrara's assertions.

The testing and analysis done of the fluids and material at Granites and DBS did not suggest any contamination or toxicity.

There is nothing in the material provided as part of the investigation that suggests any breakdown or defect in any of the processes that control hazardous chemical substances in use at Newmont Tanami.

This investigation has not revealed any evidence to support the allegations raised by Reece Ferrara.

## STATEMENT OF TEAGAN EMPTAGE

Email: [REDACTED]

Ph: [REDACTED]

1. My name is Teagan Emptage.
2. I am a medical advisor employed by Newmont Operations.
3. My role covers emergency and primary health care, injury management, workers compensation, occupational health.
4. I have been working at Newmont Tanami for 12 months full time.
5. I am a registered paramedic.
6. I briefly spoke to Reece Ferrara on the phone before I flew out on Friday 4 February as part of a Musculo-skeletal injury handover.
7. I flew back in on Friday 11 February and worked with Reece at the DBS clinic on Friday afternoon and Saturday 12 February.
8. Reece mentioned several times to me about a patient at DBS that he thought had cyanide exposure which he had escalated through to management. He thought it was related to a toxic exposure event on site and that common presentations of heat stress, gastro and cold & flu were all related. Several times he expressed the opinion that he wouldn't be coming on site again as this had happened to him before.
9. I assured him that there was no cyanide at DBS and that it was only used in the gold room at Granites.
10. He seemed fixated on the oxygen readings he said he had seen in that patient and that he couldn't get the oxygen readings to go above 98.
11. Again I explained to him that there were many reasons for pulse oximeter readings and that I didn't feel that the common presentations that he was referring to were linked.



12. At around 5pm on Saturday afternoon I received a call from a contractor on site that one of the workers on the "TE2" project was showing signs of heat stress.
13. The patient (IP1) arrived at the clinic at around 5:15pm.
14. IP1 was flushed and complained of headache and slight nausea.
15. I started making my assessment.
16. IP1 had been working in over 40 degree heat for around four hours. It was his first shift in those conditions. He had been working on a concrete pad which was too hot to kneel on.
17. I asked for a urine sample and it read at 1.026 which indicates moderate dehydration.
18. While I was in the middle of my assessment Reece put on a pulse oximeter. The initial reading showed 88 and he immediately said it was dangerously low and it was exactly the same as the patient he had seen two days earlier.
19. My focus was on getting some fluids into IP1 as that was the main issue. While there was a low reading from the oximeter it was not dangerously low and could have been explained by the monitor still calibrating or by the dehydration. After a few seconds the reading had increased anyway from 88 to around 94 which was normal.
20. Reece put an oxygen rebreather mask on which gave IP1 100% oxygen and went to make a phone call to the Doctor.
21. I took IP1's blood pressure and heart rate which were normal.
22. In dehydration patients we like to do an ECG as dehydration can affect the heart rhythm so I began to set that up.
23. IP1's oxygen reading went to 100 so I took off the oxygen rebreather and set him up with nasal prongs as that was all that was necessary.
24. I did the ECG which appeared to show an abnormality.
25. I went to speak to Reece about this but he was on the phone and I overheard him talking to the doctor about the toxic event on site.

26. Usually the reason for an abnormal ECG result like this might be a lack of electrolytes and I prepared to set up the IV cannula.
27. As I was doing this I overheard a patient (IP2) come in complaining of a sore throat and requesting a RAT.
28. I overheard Reece saying immediately that it was linked to a toxic event on site.
29. I stopped what I was doing and went out and tried to find out what was going on. IP2 was from underground and said that he had a sore throat and just wanted a RAT so that he could safely get on the bus to return to the village.
30. I gave him a RAT and asked him to complete it and to wait for the result while I went back and put the IV cannula in for IP1.
31. While I was doing this Reece had instructed IP2 to take off his clothes and have a shower and told me that he had taken oxygen readings and that IP2 had low oxygen readings as well and the two patients were definitely linked. The oxygen readings I was seeing from IP2 were between 94 and up to 97/98 which was normal.
32. I told him I couldn't see how an electrician working two or three kms from the entrance to the mine and a worker from underground could be linked.
33. Reece then went to call Dr Townsend again.
34. While he was on the phone IP2 came out of the shower and I clarified with him his symptoms again. He confirmed his only symptom was a sore throat and he didn't have headache, nausea or any other symptoms I could think of that were in common with IP1. By that time the RAT had come back negative.
35. I asked him whether he had any other concerns and he said he was worried about the toxic exposure.
36. I told him I didn't believe that was the case and IP2 seemed relieved by this. I told him he could get on the bus and return to the village and gave him an extra RAT for the morning and some throat lozenges. IP2 then left.

37. Reece was still on the phone to Dr Townsend. I rang Brett Pascoe, the Safety Superintendent for the site. I told him I was trying to provide treatment to multiple patients and Reece was unnecessarily inciting fear and distress in the patients. I asked for assistance as Reece did not appear to be listening to my clinical reasoning and seemed increasingly distressed himself. Brett told me he would come down with security.
38. I then returned to IP1 who appeared to be improving.
39. Reece came back in and asked where IP2 was and when I told him he had left he seemed upset by that and said he hadn't finished with him yet.
40. I asked him what the doctor had been saying but he wouldn't be drawn on it. He just kept saying it must be toxins and that I was not looking at the whole scope of the situation.
41. Another patient then came in with a splinter which I removed. That was simple and quick.
42. When I returned Reece was on the phone to the doctor again. The volume was up quite loud and I could hear the doctor asking Reece if he was alone. Reece told him I was there and the Doctor asked to speak to me.
43. Reece left the room and the Doctor asked me whether I had any concerns. I confirmed that I did and that Reece didn't appear to be listening to what I was saying. I took the doctor through what had happened with IP1, including the abnormality on the ECG, and he agreed that it was a heat stress and asked me to continue my treatment.
44. Dr Townsend expressed concern for Reece's mental state as he appeared to be fixated on a toxic event. Dr Townsend told me he had spoken to Justin Bryce (who is safety officer on site) about his concerns and I told Dr Townsend that Brett Pascoe was on his way.
45. Brett and the security officer arrived and talked to Reece in the front room and shortly after that left together.
46. Since that time I have reviewed the clinical notes for all of the presentations to the clinics at Granites and DBS.

47. The only similar presentations I could find was for Findlay Bugdan who presented with heat rash on his feet and ankles on 19 January which on the surface looked similar to Jacob Boscato who presented with lower leg blisters on 7 February.

48. However, Mr Bugdan works at DBS while Mr Boscato was at Granites, which are around 40km apart.

49. I treated Mr Bugdan myself. His condition improved when he bought some new socks and was given dermaid and pinetarsol to use.

50. In my opinion there is no link between the two cases.

51. I could find no other link between cases in January or February at DBS or Granites.

This statement is true and correct to the best of my knowledge.

Signed:



Name: Teagan Emptage

Date:

11/3/22.

## STATEMENT OF DR GRANT TOWNSEND

Email: [REDACTED]

1. My name is Dr Grant Townsend.
2. I am a Senior Occupational Physician Registrar at OccuMED.
3. OccuMED provides an advisory service for the medical advisors (medics and nurses) on site at Newmont. Occupational medicine, among other matters, is concerned with the effect of workplace hazards on health.
4. I have been supporting Newmont since 2014.
5. I am very familiar with Newmont's operations and have been to site at Tanami in 2018 when I spent three days there being shown around the DBS mine site and the processing site.
6. I do recall being contacted by Mr Reece Ferrara on around the 7<sup>th</sup> of February 2022 who advised me that there were several workers that had suffered superficial burns and his working theory was that the workers had been exposed to water that had been heavily contaminated with lime.
7. My recollection is that he told me that several workers had been working in knee deep water for several hours at a time following an accidental water leak that affected some of the lime storage containers and these were the group (potential cluster) of workers presenting with the burns in question.
8. It seemed plausible that if there had been some sort of leak or problem with lime storage and workers had been exposed to water causing a high enough concentration of lime that there might be some superficial burns or more likely contact dermatitis (skin irritation) as a result of that higher than normal, sustained skin exposure.
9. At that stage I counselled him to remain within his medical boundaries of treating the patients primarily but that he should pass on his concerns about the possible lime exposure to the relevant people on site so suitable investigations could be undertaken to either support or disprove this theoretic explanation for the worker's presentations.

10. I have since reviewed the photo of the blisters, which is shown below.



11. This photo shows a superficial burn. It is very difficult to say what has caused it when in isolation.

12. Normally I would take a careful history of the patient to see what he had been doing leading up to the skin irritation as this would be the primary factor in determining the likely causation and thus treatment for the worker. For example, has the worker purchased new clothes (dyes present from the clothing manufacturing process can be present in new clothes particularly from overseas sources), are they using new detergent to wash their clothes or are they working in a new area (new occupational exposure, changes in normal work routine/processes)?

13. I have since been advised that Mr Boscato had been wearing new gum boots and had been working in those gumboots in hot and humid conditions for two days. I was also then advised that he had not been exposed to processed water. I am advised that the source of the moisture in the gum boots was Mr Boscato's sweat.

14. Now knowing the history of the patient leading up to the skin irritation, a more likely explanation was that the new gum boots combined with heavy sweating might be the source of the skin irritation and I would recommend that those gum boots not be used by that worker again until testing for allergies can be undertaken.

15. The second time I recall having an interaction with Reece was concerning Mr Hill on or around the 10<sup>th</sup> of February.

16. I can recall Reece contacting me and describing symptoms including low oxygen saturation readings (from a pulse oximeter) with associated nausea and diarrhoea.

17. These symptoms are what I would describe as non-specific meaning they could arise from many differential diagnoses and again an understanding of the patient's history leading up to the symptomatic presentation is critical in order to accurately determine their most likely medical diagnosis.
18. Reece advised me that his primary diagnosis for the worker's presentation was an acute cyanide exposure which I found extremely unlikely when I learned that the patient's occupation was an underground electrician. To the best of my knowledge of the Tanami mine site the only possible sources of cyanide are within the site's gold room which not only a significant distance away from the underground mine but it is a heavily controlled and regulated chemical given its highly hazardous nature making the likelihood of this worker being a true exposure to cyanide extremely unlikely.
19. Also, from a pathophysiological response to an acute cyanide exposure the worker would likely be far more unwell with a critically unwell presentation rather than the reported mild, non-specific symptoms Reece reported to me. Both from a medical as well as an occupational perspective, an acute accidental cyanide exposure with this history seemed nearly impossible on the balance of probabilities.
20. I had several conversations with Reece during the afternoon.
21. Reece seemed very concerned about the low oxygen reading despite the worker's remaining medical observations (BP, pulse rate, respiration rate, etc.) all being within normal limits raising the possibility that the detected lower than normal oxygen saturations were a false positive?
22. The lower-than-normal oxygen level needs to be taken in context as many factors can explain its result especially in an otherwise well patient with only minor symptoms. My recollection was that the worker's remaining clinical examination was normal and it was likely either an error in assessment or the low oxygen readings were due to dehydration as it can cause a shutting down of the smaller peripheral blood vessels due to intra-vascular depletion.

23. Reece held the view that the oxygen reading should have been at 100% which is even a perfectly normal and healthy individual is often not observed as a small component of the blood usually remains deoxygenated.
24. There is no logical or medical support for the view that the oxygen reading needs to get to 100% as normal for a non-smoker is typically any reading over 98% and I advised Reece of that several times but he was adamant in his belief that this result was necessary for the health of the patient. Forcing a patient's oxygen levels to artificially high levels can actually potentially cause harm to the individual by triggering the release of oxygen free radicals, which is why in most clinical cases levels around 97-98% is the upper level usually targeted for patient care given there are limited health benefits (and even risks) of levels over 98%.
25. I don't recall advising Reece that he should monitor the patient overnight. However, I can say that usually I would take a cautious approach if the medic advised me, they were really worried about a patient as I am relying on the medic to give me accurate medical information over the phone. Often, I will take the specific medic's opinion and concerns on board when recommending management or treatment, given they are ultimately responsible for the patient and they are physically present with them. Reece recommended this course of action to monitor the worker overnight and at the time had limited ability to overrule his clinical assessment of the worker.
26. The other feature issue relevant to this case was that later that day I received the emailed medical consultation form from Reece in which he had recorded that the worker had previously recovered from Covid-19 infection several months prior. I was not told this relevant past medical history at the time of my phone consultation with Reece and this alone could have explained the worker's asymptomatic lower than normal oxygen saturations levels.
27. Currently the full pathophysiological effects of unvaccinated CV-19 cases are still coming to light but given the pathogen can cause vascular and clotting issues the current theory is that even after symptomatic recovery from CV-19 the disease process can cause damage to the vascular



system as there are multiple case studies of post CV-19 infection patients suffering from lower-than-normal oxygen saturations.

28. While it is not presently known how Covid causes these observed vascular issues it is possible that these individuals could suffer magnified effects when dehydrated compared to previously uninfected workers.
29. The third interaction I can recall having with Reece was on the 12<sup>th</sup> of February 2022 when I received several calls from Reece during the course of the afternoon.
30. I recall Reece insisting that there was another case of cyanide poisoning in one of the workers which again I found this report extremely implausible as the worker in question was only presenting to him with very minor and non-specific symptoms including headache and nausea. There are multiple other differential diagnoses to explain that worker's presentation I would consider first without significant supportive evidence otherwise.
31. I recall asking him during one of the conversations "could you at least consider that it might be something else other than cyanide?" Reece's response was a flat out "No" as he was certain this was the only possible explanation for the worker's presentation. It was at this point in time I became concerned about Reece's mental state as this suggested to me that he could be suffering from a form of paranoia as he was totally unwilling to even consider far more likely and probable diagnoses for this worker.
32. I then called Mr Justin Bryce. Reece's manager due to the nature of the phone conversations I was having with Reece as I expressed my medical concerns about Reece's state of mind.
33. After my first phone call with Justin, Reece again contacted me insisting we needed to look into a potential cyanide poisoning cause for the worker and he expressed concerns that the company could be covering up the exposures to the workers onsite. This was, in my medical opinion, consistent with an acute paranoid episode as I could see no logic reason how a medic could be making these conclusions given the lack of any supporting evidence of his alleged claims at the mine site.

34. It was at this point in time I was certain that Reece was unwell and I contacted Justin again for a second time authorising him to relieve Reece from all work duties on the grounds he was medically unwell from a mental health perspective in my clinical opinion.
35. A final phone call was received from Reece and I asked him whether he was alone and he told me that Teagan was with him. I asked to speak to Teagan and the phone was passed to Teagan.
36. Teagan confirmed that she thought the patient was only suffering from typical dehydration following unaccustomed work in 40-degree Celsius heat and had no reasoning to suspect he was exposed to cyanide in any form. Teagan appeared guarded on the phone call which I suspect was because of Reece's close proximity as he was answering my questions with only single words of yes or no.
37. The subsequent conversation with Teagan supported my medical concerns that Reece appeared to be suffering from a mental health issue that was impairing his judgement putting both himself and his patients at risk given he was clearly ignoring far more logical and common place causes for the worker's presentation.
38. My view was that Reece was a danger to patient care as he appeared to me to have a view that there was a toxic event happening without any plausible reason for that belief.
39. He seemed so fixated that I was worried he may misdiagnose a worker presenting with an unrelated but serious illness which could then have serious consequences E.g. Acute appendicitis.
40. This was the first instance where I have had to medically relieve a medic or nurse from a remote mine site over the phone without performing a standard, in rooms medical assessment but I was so clinically concerned I felt I had no viable alternative in this case.
41. I understand that Reece was then escorted from the medical room back to his accommodation. My recommendation was that he be flown home and undergo a formal psychiatric evaluation.
42. I do not recall ever being consulted about a hazardous chemical leak or exposure leading to illness, injury or a cluster of illnesses or injuries in my time supporting Newmont.

This statement is true and correct to the best of my knowledge.

Signed:

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

Name: Dr Grant Townsend

Date: 07/038/22