

# Report on the Jagersfontein Tailings Disaster



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## Executive Summary

In the early hours of 11 September 2022, the tailing dam at the Jagersfontein mine burst its wall, sending a torrent of toxic mine waste down the slope to the settlements of Charlesville and Itumeleng. Two people died, two are still missing, 164 houses were partially or totally destroyed, farmland was rendered toxic and unusable, and livestock was killed.

Both the mining company and the government had repeatedly been warned of the danger, by the local municipality, by employees and by residents. But the company continued to pour waste into the dam as they processed it for diamonds. They built the dam wall using the tailings themselves as material for the wall, a practice known to be unstable. The government, in the form of the Department of Minerals and Energy and the Department of Water and Sanitation, did nothing effective to relieve the danger.

The impact of this disaster has been to render the local population homeless and send them to a holding shelter 120kms away, conveniently also far away from the media. A year later they are living in rented accommodation in Jagersfontein, Fauresmith and in the two townships, but still not in reconstructed houses.

Bench Marks Foundation first visited Jagersfontein the day after the disaster and has visited many times since. The research team has conducted many interviews with key role players and informants. They have also conducted thorough desktop research into the history of the mine and the genesis of the dam wall failure that caused the disaster. Regrettably, the company has refused to communicate with the researchers, consistent with its general strategy of silence.

Meanwhile, every day, the company is removing tailings from the dam and disposing of them down the hole, which is the site of the original mine. In the process, the dam wall becomes thinner and more vulnerable, and when it fills again with the summer rains, there is a serious risk of another rupture.

Thabo, a former employee of the mine and current resident of Charlesville, was woken by the sound of the dam wall bursting. He himself was carried away by the torrent but managed, almost miraculously, to survive. Just before the torrent hit them, he was helping a family to escape. The mother was one of those who died.

The impact of the disaster was devastating. Kopanong municipality was already an impoverished and neglected community before the disaster, with an unemployment rate of more than 70% and virtually zero municipal revenue. The community tells of the psychological suffering they continue to endure, and the cloud of fear under which they exist. This is on top of the material loss – of homes, of farming livelihoods and of health. The deposits which now poison the earth and the air in all probability contain arsenic and asbestos, commonly found in diamond mine tailings. The sewage system is dysfunctional and the water is contaminated.

In the immediate aftermath of the disaster, Jagersfontein was visited by politicians from the President to various parliamentary committees. But the visits were more plentiful than the action. The Department of Mineral Resources has spent most of its energy ‘explaining’ why it is unable to regulate the mine – because, technically, the diamond re-processing activities are not classified as mining. Strangely, it is the same DMRE that issued a mining licence to the Jagersfontein Community Trust in 2009. The Department of Water and Sanitation initiated an official investigation to inform possible legal options. There has still been no report from this.

The company has said it takes full responsibility for the disaster and made R20 million available for restitution. Minerals Council South Africa added a further R50 million. In May this year, only R100,000 has actually been disbursed. Bench Marks estimates that R150 million will be required for full restitution.

The company has consistently failed to communicate with the local community – to this day there is no clear information available about how the remainder of the tailings, which look precarious, are being made safe. Instead the company has held meetings with individual families, who have been told that if they don't sign papers clearing the mine against court action, the mine will not rebuild their houses.

There are many promises of assistance, from the Deputy President and from the provincial government, but little action.

South Africa has a clear legislative framework regulating the construction and management of tailings dams. In addition, there is a wealth of material readily available on international best practice. Despite all this, the research team found that the Jagersfontein dam had violated many of these. It was built on top of an aquifer and at the confluence of a number of water sources, preventing the tailings from drying adequately. The gradient of the dam and the growing height of the dam wall, as more and more waste were pumped into the dam, rendered it unsafe. Its location above township communities, but below the white community, was typical of apartheid planning. And its location near to critical infrastructure and uphill from unpolluted water sources compounded the effects of the disaster.

The report has recommendations for the company, for the government and for the NPA.

For the company it recommends, amongst other things, the complete removal of the tailings from their current location and a halt to all mining and processing activity until that has been done. The company must provide the community with information and documentation, dismiss those who are responsible, and fully compensate and give full restitution to the victims, as well as contributing to the development of a local economic development strategy for the community of Jagersfontein and Kopanong. The company should commit to implementing the Global Industry Standard on Tailings Management (GISTM).

For the government, it recommends a number of legislative and regulatory measures for tailings dams, as well as a hotline to allow members of the public to raise concerns about the condition of any dam. Government officials responsible for the errors and negligence behind the disaster must be dismissed, and vacant posts in the mining inspectorate must be filled. The company must be forced to respect the 'polluter pay' principle and implement full restitution. Mining companies must be prohibited from selling non-profitable mines, and they must be required to close and properly rehabilitate them.

The National Prosecuting Authority must institute criminal proceedings against all parties responsible for the disaster.

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## List of Abbreviations

|       |                                                  |
|-------|--------------------------------------------------|
| DMRE  | Department of Mineral Resources and Energy       |
| IMS   | Institute of Mine Seismology                     |
| MPRDA | Minerals and Petroleum Resources Development Act |
| R704  | Regional Road 704                                |
| SABS  | South African Bureau of Standards                |
| SANS  | South African National Standards                 |

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Moses Cloete  
Executive Director

## 1. Introduction

On Sunday morning, 11 September 2022, between 02:00 and 06:00 in the morning, the residents of Charlesville and Itumeleng villages in Jagersfontein woke up to a rumbling sound. The sound was soon followed by a wave of 'grey mud' that rolled through the edges of both communities. The 'grey mud' (tailing sludge from a nearby mine) swept over the R704 regional road in three places.

The torrent swept through the township communities of Charlesville and Itumeleng, killing two people, leaving two missing and injuring dozens more, and severely damaging 164 houses. Many cars were swept away. Furniture, electrical appliances, clothes and personal belongings were destroyed. The waste covered farmland and grazing fields. It ended in the Proses River about 8.5 kilometres away<sup>1</sup>.



*Figure 1 Photo of the aftermath. Many of the low-income residents of Charlesville lost cars, furniture, homes, loved ones (Photo Brown Motsau and David van Wyk)*

Most health and safety officials would agree that most mine disasters are caused by human negligence, error, greed, or a combination of the three.

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<sup>1</sup> <http://www.wise-uranium.org/mdaf.html>, accessed 21st August 2023.





Figure 2 Location of Jagersfontein in South Africa (Sapora, 2010)

## 1.1 Structure of the report

After explaining how we conducted this research, we outline the history of land ownership and diamond mining in Jagersfontein. We then examine the 12-year period leading up to the disaster before giving voice to one survivor's experience of it. We then look at its impact and at the responses of government and the company, followed by identifying the promises made for restitution and compensation. We then outline the legal and best practice situation for tailings dams, before making our findings, drawing conclusions and finally making a series of recommendations for the mining company, national government and the National Prosecuting Authority.

## 1.2 Tailings dams

[IndustriALL Global Union](#), the global umbrella labour organisation, describes tailings and tailings dams as follows:

*Tailings are the waste products from mining. Mechanical and chemical processes are used to grind up rock into a fine sand, to extract the valuable mineral or metal from the rock ore. All the unrecoverable and uneconomic remnants from this process are waste. They include finely ground rock particles, chemicals, minerals, and water. Depending on the type of mining, tailings can be liquid, solid or a slurry of fine particles. Many substances found in tailings are toxic, even radioactive, and it's not uncommon to find large amounts of cyanide, mercury and arsenic in tailings.*

*Tailings dams are used to store water and waste that come as by products from the mining process. It is estimated there are at least 3,500 tailings dams around the world. But as there are around 30,000 industrial mines, the number of tailings dams is likely to be much higher.*

*Tailings dams can be huge in size, as big as lakes, and reach 300 metres high. As the slurry of waste is piped into the dam, the solids settle to the bottom and the water is recycled to be used in the separation process again.*

*Rather than reinforced concrete, tailings dams use earth or rock to create a barrage. However, most tailings dams use the cheaper but more dangerous upstream method of construction, using the tailings themselves to create a barrier. The dam is then continually raised to accommodate more waste. These dams are more unstable and more prone to leakage.*

*Tailings dams need regular maintenance and monitoring to ensure that there is sufficient drainage and the dam is strong enough to contain the mining waste.*

*Tailings dams can pose a threat to local wildlife as birds and animals bathe in and drink from the contaminated waters. Leakage of toxic substances from tailings dams can also cause damage to the immediate environment. (IndustriALL Global Union, 2019).*

Becker, G (2020) explains the uncertainties about tailings dams, which is why they generally can't be insured:

*The insurance industry has to set the bar high, even where standards exist. This is especially so in the case of tailings facilities, given that the risks involved are sizable and extremely challenging to assess. Many tailings dams are thirty or more years old, making it almost impossible to accurately establish their current condition, much less how they will continue to perform over time. This is a major reason why tailings dams are generally not insured.*

*The possible effects of climate change on tailings facilities are adding to the challenges faced by the industry and creating an additional level of uncertainty for insurers. Unlike water retention dams, tailings dams are continuously constructed by 'raises' during the life of a mine (Dugdale & Isleib, 2019). Given the potential for the frequency and intensity of rainfall to increase in certain regions, this can increase the aggregate risk of dam failure – as tailings may liquify or break down over time when exposed to heavier rainfall if not managed appropriately. (Becker, G. 2020:207).*

The Institute of Mine Seismology describes how hard it is to monitor the dams:

*Tailings storage facilities are some of the most challenging structures to operate in the mining industry. These structures fail far more regularly than normal water-storage dams. Many of these structures are susceptible to liquefaction and piping failure. [Liquefaction is when the tailings become too wet, the balance between liquids and solids tilts in favour of the liquids, which causes the tailings to become unstable and dangerous.] Therefore, they need to be monitored carefully...*

*[Most current tailings monitoring techniques] can easily miss the early signs of failure, where the zone of degradation may be small and localised.*

*In some cases, radars and/or high-resolution cameras are used to monitor small deformations on the dam walls. Unfortunately, these methods measure surface perturbations and are incapable of detecting internal changes within the walls.*

*Of further concern with current monitoring technologies is the poor performance during periods of heavy rainfall. (Institute of Mine Seismology [IMS], 2022)*

Water and tailings do not go together. Tailings exist to evaporate and train water out of mine sludge as quickly as possible. Where tailings are overfull and start to overflow (seepage flow), it should be recognised as a clear sign of imminent disaster.

*Small deformations on the dam wall become very difficult to detect due to the fluid on the wall's surface. Similarly, seepage flow rates are difficult to interpret during heavy rainfall due to rainwater flowing down the embankment, making seepage flow measuring challenging. Limitations in measuring seepage flow are unfortunate, as heavy rain has been known to be a significant contributing factor to tailings dam wall failures. (IMS, 2022).*

In summary, tailings dams contain huge quantities of toxic material. They are often constructed in an incremental manner, saving cost by using the waste material itself to build the dam wall, whose height is raised as the quantity of waste material grows. This requires regulation and constant monitoring. Such dams are vulnerable to heavy rainfall, which can become more frequent in some areas as a result of climate change. Deterioration in the structural integrity of the dam walls can be hard to detect.

## 2. Methodology

On 12 September 2022, the day after the disaster, Bench Marks' lead researcher, David van Wyk, together with Dr Anita Venter of the University of the Free State, visited Jagersfontein. Apart from familiarising themselves with the extent of the disaster and the layout of the town and the mine, they meet with private business owners, individuals affected by the disaster and the Kopanong Mayor and his personal assistant. In the process, they identified key informants.

David van Wyk visited Jagersfontein again on 16 September 2022, accompanied by Bench Marks staff member Brown Motsau and Bench Marks Community Facilitator for the Free State, Makhotla Sefuli. On this visit, they observed the [visit](#) by the Chairperson of the Portfolio Committee on Mineral Resources and Energy. Mine officials were not available to be interviewed either telephonically or in person.

On 21 September 2022, David van Wyk returned to Jagersfontein with a crew from the TV current affairs production, [Checkpoint](#). During this visit, the TV crew managed to corner the mine manager on the flooded road below the tailings, but he refused to speak and took evasive action. David interviewed key informants and observed local government interactions with the community. He also visited the disaster victims at the holding centre just outside Bloemfontein. He observed the response of government and of Johan Rupert's Reinnet to the disaster.

On 22 September, the Bench Marks staff observed the visit of the Chairperson of the National Council of Provinces Select Committee on Land Reform, Environment, Mineral Resources & Energy, Tebogo Constance Modise, who met with the Mayor of Kopanong, Xolani Stalin-Koba Tseletsele, and was taken on a site visit.

On 17 November 2022, David returned to Jagersfontein with Richard Spoor, attorney. They visited the first Human Settlements Department show house in Charlesville, and met with the Mayor of Kopanong and his team. They also met with and interviewed key community informants.

On 19 January 2023, David met with key community informants in Bloemfontein, a location designed to minimise the possibility of information being affected by intimidation in the Jagersfontein area.

On 5 April 2023, David accompanied a team from [Workers World Media](#) to Jagersfontein to film a documentary. Again, there were interviews with key informations and, in addition, river water was tested for Total Dissolved Solids (TDS).

David returned to Jagersfontein for three further visits in June, July and August, accompanied by a new Bench Marks researcher, Dr Nteboheng Phakisi-Portas. On these visits, they monitored progress on rehabilitation and restoration, interviewed contractors working on house repairs, met with the Mayor and his team (securing permission for future workshops with the community and a community skills audit) and interviewed key informants.

We made concerted efforts to engage with the management of the mine. We obtained the cellphone and office numbers of the mining company. All our calls were diverted to a secretary who promised to relay our requests for meetings with management to the managers. There was no response. The media teams who accompanied the research team also got no response from management.

In addition, the Bench Marks team conducted desktop to establish:

- The history of the mine and its current status.
- The environmental impact assessments that had been conducted, the environmental management plans that existed and the existence and nature of other official documentation and correspondence related to the mining operation.
- Global best practice in the construction, management, and maintenance of tailings. National legislation and regulations for Australia, Canada and Brazil were studied, and international expert opinion was accessed and compared.

### **3. Historical context of Jagersfontein**

#### **3.1 1867 to 1931 (the pre-DeBeers era)**

The history of Jagersfontein has been well documented (Philip, 2014). Jagersfontein originally belonged to Gert Jagers, a Griqua farmer. Those who farmed in the south-western Free State often settled in close proximity to fountains (natural springs). It was the stream that came from the fountain that ended up under the tailings that broke on 11 September 2022.

Cornelius Johannes Visser bought Jagersfontein from Gert Jagers in 1856. When a diamond was found on the farm, a few diggers from Kimberley and the Vaal River were attracted and a portion of the farm was set aside as a public-digging site, charging a monthly fee of £2 per digger.

By 1875, the opencast diggings developed into a deep mine, and it was realised that “the diamonds were concentrated within a narrowing area of ever-increasing yields of good quality gem stones” (McNish, 1968:160-161).

After 1880, the big diamond mining companies began to show an interest in Jagersfontein. It was bought by the Jagersfontein Mining & Estate Company in 1887. At first, it was worked as an opencast system, resulting in a huge pit, or hole, like that in Kimberley. By 1910, however, a shaft had been sunk, with a second shaft added later (McNish, 1968). It employed 400 white and 4,000 black workers.

### 3.2 1931 to 2010 (the De Beers era)

De Beers took over the mine in 1931 and operated it until 1975, when it was placed under their care and maintenance, until they sold it in 2010.

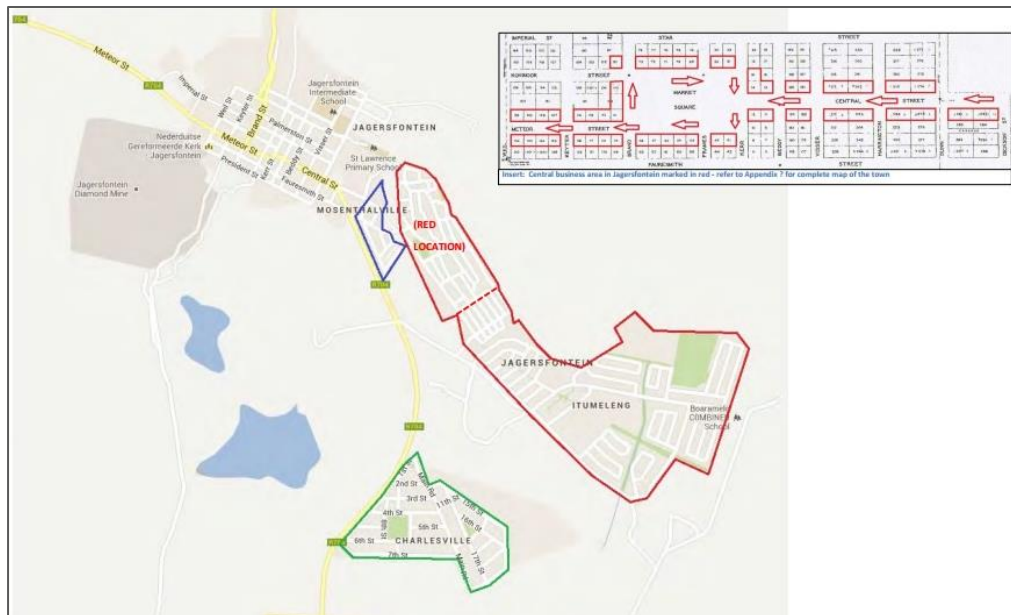


Figure 3 Layout of the town of Jagersfontein (Google Maps and Mayor's office)

As was documented (Philip, 2014):

*Although the De Beers period can be considered the second major period of prosperity for the town, it did not leave such a visible footprint on the town itself, as during the first period, with the Jagersfontein Mining and Exploration Company already establishing the town. Unsuccessful negotiations with the town in obtaining municipal grounds for the erection of housing for mining employees resulted in the establishment of a new mining town, Charlesville, south-east of Jagersfontein and topographically below the mining operation. The establishment of Charlesville meant that the town Jagersfontein mainly served as an economic business centre for the mine, the mining village, and nearby smaller towns.*

*Three years prior to the closing, the University of the Free State conducted a socio-economic assessment to assess the impact the closure of the mine would have on the town. The research pointed out that three small towns, Charlesville, Jagersfontein and Fauresmith, had little chance of survival in a rural area mainly reliant on agricultural activities for income. De Beers donated Charlesville to the Department of Welfare to house pensioners and people with disabilities unable to work. (Philip, 2014)*

During this period, the tailings were small and insignificant.

## 4. Leading up to the disaster: 2010 to 2022

### 4.1 Ownership

De Beers sold the asset to a broad-based BEE entity, the Superkolong Consortium, in 2010. Part of the deal was a commitment by Superkolong to set up a Community Trust (the [Itumeleng Community Trust](#)) which would own 10% equity in the holding company, receive R20 million cash for investment, and



have “a deferred right” to an additional R30 million. Superkolong was committed to skills transfer to the local community, so that future employees could come from that community.

De Beers Acting CEO, Barend Petersen, is quoted as saying:

*I am very pleased to say that De Beers, with some determination to do the ‘right thing’, and taking the time necessary to engage with stakeholders affected by our business, has concluded another transaction to introduce miners with empowerment credentials to opportunities which have the potential to deliver significant returns for many. The impact, particularly at local government level, and in the Provinces where economic development is so important to communities near mining resources, cannot be over-stated, as development in the rural areas of South Africa can exponentially benefit the economy and therefore society... We hope that this deal will make a meaningful contribution to the community. (Diamond World News Service, 2010)*

Jagersfontein Developments (Pty) Ltd came into being in 2011 when Johann Rupert, through Luxembourg-registered Reinert Investments, and Chris Potgieter of Sonop, the largest alluvial diamond mining operation in the southern hemisphere, took shares in Superkolong (Ryan, 2011). The new owners who took over from De Beers ramped up the tailings reclamation process, extracting diamonds from the other tailings sites around the operation and depositing the tailings from that process on the central dump that eventually broke.

In 2022, Rupert sold his shares to the Stargems Group in Dubai, just months before the current tailings disaster.



Figure 4 Photos of Jagersfontein tailings in 2005 and 2022 (Google Earth)

## 4.2 Growing concern about the dam

### 4.2.1 Community concern

In interviews with Bench Marks after the disaster, residents of Itumeleng Township and Charlesville claimed that they became concerned when Jagersfontein Developments (Pty) Ltd started piling layer upon steep layer of fresh tailings on the steep northern embankment/wall of the dam. The tailings began to tower over both communities. Both Charlesville and Itumeleng Township are located downhill, below the dam, which is on a slope slanting down towards these two communities. The height and gradient of the tailings are also risky, and there were signs of stress and overload which became obvious to the general public, and even the mayor, who a year earlier warned that the tailings dam was unstable and posed a threat to the public (Pijoos, 2022).

Mine employees and Charlesville residents claimed that, in the two days leading up to the disaster, employees and community members warned the mine that the tailings dam was dangerously overloaded and about to break. The employees were told to keep quiet and go back to work.

Witness B, employee in the pump station that oversaw the pumping of slurry into the tailings, said:

*We were pumping too much slurry into the tailings dam, every hour and every day. On the Saturday night before the tailings broke (10 September 2022), we warned our supervisors three times to say that the tailings dam is going to break. But they said, 'don't worry, nothing will happen, go back to work.'*

According to a community member interviewed, the police in Jagersfontein lacked impartiality; they suppressed community protests that attempted to bring the dangers posed by the tailings to the attention of management and the authorities.

At 02:00 am on Sunday, 11 September 2022, members of the two communities claimed that when they heard rumbling sounds from the tailings dams, they phoned mine security, but security told them they had nothing to fear from the tailings. The tailings burst between 02:00 and 06:00 on that morning.

#### **4.2.2 Government concern**

**The Department of Water and Sanitation** also expressed its concerns and issued directives.

In the days following the tailings failure, News24 reported how the DWS had raised red flags over the Jagersfontein mine's tailings "storage" <sup>(08)</sup> for years, highlighting excessive volumes disposed of in the facilities as well as the need for an "emergency preparedness plan" (Steyn, Jagersfontein: Dept of Water warned about facilities, need for 'emergency' plan, 2022).

In December 2020, the department issued a directive ordering Jagersfontein Developments to cease operations for disposing volumes above authorised limits. The directive was lifted in January 2021. The directive noted how, on 29 September 2020, the department said the firm had exceeded the volumes authorised for the disposal on the fine tailings storage facility in contravention of the water-use licence conditions, describing how the lack of adequate planning and "blatant non-compliance" has "placed all parties in a precarious situation" (Bega, 2022).

It cited a report by SRK Consulting in November 2020, in which engineers identified a "serious risk" in association with the fine tailings disposal facility. The directive, too, noted how since the department's notice was issued "wherein you were notified not to dispose of further volumes of waste ... your operations have disposed of further volumes of waste".

The Mail and Guardian cited Carin Bosman, a water expert, saying that the department's officials had:

*done a great job. They issued a directive, they followed up, but, like always, the 'politics of pollution' probably played a role in the lifting of the directive. When I worked for the department, the battle with the politicians to keep directives issued in place was always harder than the battle to get the mines to do the right thing.* (Bega, 2022).

**The Department of Mineral Resources and Energy** claim that they ordered the mine to stop operating two years ago, but that the company ignored this instruction (Bega, 2022).

**The Mayor**, in a Bench Marks interview, responded to the question, "Were you aware that the tailings posed a danger?"

*Yes, I was. I warned the mine bosses many times and even the Department of Mineral Resources and Energy, but they refused to listen. Mining is a national competency, so I could do nothing about what happened in the mine. But the environment is a local competency; now I am expected to clear up the environmental mess.*



*Figure 5 Facebook post of Mayor of Kopanong identifying the danger of a dam break, more than a year before the disaster*

## 5. A survivor's testimony

Thabo, a former employee of the mine and current resident of Charlesville recounts the events of the early morning of 11 September 2022:

*I was working at the mine from 2009 to 2011. In 2009, I started as general worker; we built the diamond sorting plant. In 2011, I became an x-ray operator in the sorting plant.*

*On the Saturday we were not aware of the trouble to come. But the people who know these things say it started around two in the morning. For me it started at 5 in the morning when my wife woke me up to say I must go and check the kettle in the kitchen, it is boiling. She heard a noise. I went to the kitchen and checked the kettle, but it was off. Then I thought it was a manganese truck passing; they drive through here from the Northern Cape. But I was wondering what kind of truck was that which is not passing, staying in one place.*

*So, I went outside. My fears told me that the sound came from the mines. When I check it, I saw a wet that is not normal. We know that place; it is our place ... I thought that thing [the tailings dam] was broken. Then I went outside the yard to make sure. Then I saw it, it was coming out, I saw black, it was like it was boiling. Then I went back inside, and I said, 'My wife, that thing we thought all the years, it happened! Wake up, wake up the kids and be aware. I am coming, I just want to go and make sure what I see with my eyes.'*

*My brother came from top when I was waking the other people up shouting! My brother heard me shouting and he came from topside, and he said, 'that thing we were always talking about, it is the truth, it is happening! It has broken, let's go and make sure.' Then we ran, but when we came that side, we found that we can't cross, it has already crossed the road.*



*Then we heard an explosion [as the tailings wall gave way]. I saw something huge in the sky, like a storm, dust with water and everything. It is why I am saying, till today, I don't think anyone can see what we saw that day! It was very horrible. Then in seconds after I ran home and shouted to my wife, 'Mama, take your ID and take the children and run and go away!' and mama listened.*

*Ten minutes after we stepped away from the house, then we saw it first take the shanty. There were two houses there. It leaves the first one, but it takes the second one. It breaks the Mukuku [shack] that was standing at the side; then we saw that house exploding; then the roof came down. That was when we realised, all of us, that this was serious!*

*I looked back and started to run away. It was where I saw a father and his son struggling with the mother on the fence; then I was on that scene helping. We just took the mother to the other side of the fence, and we also go to the other side. When I looked, in seconds the son was not there. It took me, lying on my stomach, a very long distance. It tossed me again on my back, it is where I saw light, I saw my family. Then my mind told me that, 'Thabo, you are in Wolwas, that river.'*

*Then, luckily, I hit something with my shoulder. It was where my mind told me 'Thabo, catch it!'. Then I used this hand to catch hold of it [the interviewee shows his badly swollen hand]. I grabbed the fence which touched my shoulder. Then I caught it. But I feel that this thing is taking me. I tried to come out of it, but now it is too high, I am under it. Then I came out. When I came out, I looked back and saw the father also came out, and we asked each other where is the mother, and we don't know. I am covered in the stuff [tailings mud], me and the father. When we go at the back of the gate and look at the house, we saw his son hanging from the roof, using the window ledge for support. Imagine now, that short guy, how did he manage to catch the roof? Then I realised that God was with us.*

*Then the ambulance came. I showed them my injured hand and they said, 'No, Thabo just go home and clean yourself up, you will be fine.' Then I came back, to go and look, and the fence that saved me it was also not there anymore, it was gone. That is when I realised that God is alive. The father, the brother, escaped but the mother was gone ...*

*We spoke about these tailings breaking for years and years before it happened. We even made toyi-toyis, because we were afraid of that dam. But the police were involved, shooting us; they don't want us to protest or even talk to this mine boss. The police were always in front of us, between us and the mine boss, protecting him. So, we realised that there is much money given to the police so that they can interrupt and stop the right things from happening. It is very bad; you can't even accept such things happening in our lives.*

**Benchmarks:** *Since the 11<sup>th</sup> when this happened, has anyone from the mine come to speak to you?*

**Thabo:** *No one, no one ...*

**Benchmarks:** *The president came, the minister came, the premier came ...*

**Thabo:** *... but they also failed us, but they came.*

**Benchmarks:** *... but they came to speak to you? The mine boss never came.*

**Thabo:** *They [the politicians] don't even talk about him. That man is free. He is walking free, but he made such a murder.*

**Benchmarks:** *So, no one from the mine came, only the politicians?*

**Thabo:** *They are hiding this guy [the mine boss].*

## 6. The impact of the disaster

In addition to the two deaths and two missing people, and the 164 severely damaged houses, the spill that flooded down the valley had a devastating effect on livestock – one farmer in Vlakfontein lost 90% of his sheep.

And on top of the immediate effect, lawyers representing the victims believe that the tailings contained arsenic, silica and possibly asbestos, and that when the soil dries out the dust may be harmful to human health.

### 6.1 Context

1. The municipality, like many municipalities, is in effect bankrupt, with no revenue income stream. The municipality cannot even pay staff as a result.
2. The municipality has been unable to levy rates and taxes from Jagersfontein Development (Pty) Ltd back to 2009.
3. The provincial roads between Jagersfontein and neighboring towns are rapidly deteriorating. This this will impact negatively on reconstruction and development.
4. The local community is impoverished, with extremely high levels of unemployment. As can be deduced from the table below, real unemployment in Kopanong is 71,16%

*Table 1 Kopanong unemployment statistics 2011 (Stats SA)*

|                               |      |       |
|-------------------------------|------|-------|
| Total                         | 3495 | %     |
| Employed                      | 1008 | 28,84 |
| Unemployed                    | 471  | 13,48 |
| Discouraged Workseeker        | 309  | 8,84  |
| Other not economically active | 1707 | 48,84 |

### 6.2 Social and psychological effects

Those dislocated by the disaster still have not been returned to their houses or received replacement houses. The black communities of Itumeleng and Charlesville have always been on the margins of society. To be relegated to the margins according to Hugo Ka Canham (2023) leads to:

*Feelings coursing near the surface. Catching feelings. Shackled to emotions. In a defensive posture. Touchy. Surly. Chips on our shoulders. Charged in ways that those who are fully human do not have to be. Charged in ways that surprise others. Seeing into the past and future and connecting invisible but sedimented histories of trauma.*

As key informant, Thabo, put it, “Our lives were always not good, but we had accepted our fate. But since the accident, we live in constant fear. It has got worse.”

Apart from the fear of the tailings dam, the two communities have to deal with loss. A 21-year-old young man who lost his mother is haunted by the image of her being swept away by the sludge. The young man informs the Bench Marks research team that his family structure has been interrupted and that his life will never be the same without his mother:

*I tried to hold on to my mother as the sludge was taking her away, but I failed. I still remember her eyes as she was being carried away by the sludge. At night I don't sleep. I see her face; I see her scared eyes. I will never be the same again.*

Another male resident, who lost 27 cows during the accident, recalls how he is now “less of a man”. After the accident, he has lost confidence and his wife now undermines him. He still tries his best to “show that he is still strong” by working in his gardens, but the gardens are contaminated with the poisonous sludge (see picture below).



*Figure 6 Garden soil contaminated with poisonous sludge*

After a disaster, whether man-made or natural, communities experience tangible and intangible losses. Hawkins and Maurer (2011) conducted a study in New Orleans after Hurricane Katrina and discovered that the communities affected experienced different losses that were not taken into consideration in Jagersfontein – a sense of community loss (break down of social fabric), loss of trust in a stable environment, loss of things that provided security (e.g a home).

### **6.3 Houses**

Their old houses, which were swept by the sludge, have now become a “no-go-zone”. A resident, who asked the Bench Marks research team not to reveal her name, revealed that the mine is building a new house for her because the sludge swept away her old house. However, in comparison with her old house, the new one will be small.





*Figure 7 The only thing left of these Charlesville houses in the front of the photo are their foundations (Photo Brown Motsau and David van Wyk)*

The Bench Marks team visited the site where the mine is building new houses. The residents whose houses were swept away will have to settle for much smaller houses. This will be a difficult transition, but as the resident informed us: “there is nothing we can do. We have to adapt, even if adapting means settling for less.”

This means the residents of both Itumeleng and Charlesville are once again banished to even worse conditions than before. There is unfamiliarity that will come with adapting to the new living conditions – both their internal and external worlds have been shattered (Alcock, 2003).



*Figure 8 A new house being built close to the ones that were damaged by the sludge*

The smaller size of the replacement houses shows that there is no effort on the part of the mine to improve the lives of these communities. Furthermore, the tailings dam is still there, a reminder that there could be another accident in the future. The residents of these communities still live with the trauma that there could be another tailings dam accident.

When the Bench Marks Research team visited the area on 31 July 2023, more than 10 months after the disaster, only three show houses had been constructed, while a number of disaster damaged

houses in Jagersfontein were in various stages of reconstruction. The Mayor's Office expressed dismay at the slow pace of housing construction, arguing that the temporary accommodation of displaced people must be costing millions.



*Figure 9 A disaster-damaged house in the process of being repaired*

Community members are also concerned about not being subcontracted or given jobs in the reconstruction process.



*Figure 10 One of 3 new houses constructed since the disaster a year ago*

## **6.4 Health and the environment**

### **6.4.1 Medical Research Council tests**

Angela Mathee, chief specialist scientist at the environment and health research unit at the South African Medical Research Council and her team were requested by government to assist with testing on an urgent basis, "given our previous experiences with soil and water sampling."

They collected soil samples from the Charlesville area and water and sludge samples from the banks of the stream.

*On the day of our site visit, we observed that the sludge had travelled downstream in the Kromellenboog River [and well beyond] to a point at least 20km away from Jagersfontein. Sludge covered the entire expanse of the riverbed and extended well beyond the stream banks. We saw dead or dying crabs, and no other evidence of aquatic life, which may be indicators of an ecological disaster. (NEWS24, 2022)*

Mathee said anecdotal accounts of the sludge having reached the Kalkfontein Dam were shared with her team. The analytical chemistry laboratory at the University of Johannesburg is undertaking the analyses of the samples, but the results have not been published. On the potentially hazardous nature of the sludge, she explained:

*We do not yet have the results available so cannot say with any certainty. However, diamonds are being mined at Jagersfontein; tailings from diamond mines are not associated with as high a risk profile as gold mining, for example, which often predisposes at-risk groups to toxic chemicals such as lead, mercury, and arsenic. (Bega, 2022).*

#### **6.4.2 Arsenic and asbestos**

A 2012 geohydrological study found that:

*Groundwater in Jagersfontein town has been known for its arsenic contamination. The now decommissioned diamond mine located some few metres from the main town is the principal suspect of the source of arsenic. In this study, the primary objective was to assess arsenic contamination in the Jagersfontein area in order to know the degree and extend of the contamination. This was realized by carrying out a hydrocensus from where boreholes were located, and water samples collected. (Bijengsi, 2012).*

G.J. Hoon of Eko Environmental produced a report in 2013, *An impact assessment of the diamond recovery operation at Jagersfontein on surface and groundwater resources*, indicating high levels of arsenic in the natural water in and around the mine. The report also references the use of semi-treated sewage water in the diamond washing process. Water and tailings waste impacted by the operation would have flooded in the slurry wave that washed down, skirting the edges of Charlesville and Itumeleng on 11 September 2022. The long-term impact of this is still not clear.

Bench Marks Foundation is further concerned about the seeming disinterest of the authorities in the possible presence of asbestos in the tailings. Once the tailings that flooded down the valley between Itumeleng and Charlesville townships dry out, windblown and mine vehicle-generated dust containing asbestos, silica and arsenic could be spread in the community. We are concerned that the community is already complaining about coughing, itchy skins, nosebleeds, and headaches as cleanup operations are generating large amounts of dust. The impact is far from over.

Heavy summer storms in October, November and December could also see the rest of the tailings dam crumble and wash down the river.

A study entitled *The Risk of Asbestos Exposure in South African Diamond Mine Workers* reported that:

*Asbestos is associated with South African diamond mines due to the nature of kimberlite and the location of the diamond mines in relation to asbestos deposits...Asbestos fibres were identified in the lungs of five men working on diamond mines. Asbestos was present in the mine tailings of all three mines. Asbestos-related disease was diagnosed in six diamond mine workers at autopsy.*

*These findings indicate that diamond mine workers are at risk of asbestos exposure and, thus, of developing asbestos-related diseases. South Africa is a uniquely mineral-rich country and, when mining one commodity, it is likely that other minerals, including asbestos, will be accidentally mined. Even at low concentrations, asbestos has the potential to cause disease, and mining companies should be aware of the health risk of accidentally mining it. (Nelson, Murray, & Phillips, 2011).*



### 6.4.3 Sewage and water contamination

Community informants related to Bench Marks field workers how, prior to the introduction of flush latrines to Jagersfontein, sewage from the 'bucket system' was collected by the 'night car' and simply dumped into the tailings dam. This no doubt added to the already toxic mix that flooded through the dam breach on 11 September 2022.

The flood of sludge also rendered the Jagersfontein wastewater treatment plant dysfunctional, and in a Bench Marks interview on 31 July 2023, the Kopanong Mayor expressed concern about the fact that the damage to the sewage system was so extensive that the entire sewage system was still not properly functional and would have to be replaced. The mayor noted continuous sewage spills, because of the disaster damage, and he commented that the local government could not financially cope. He feared an outbreak of cholera in the upcoming rain season should the issue of the sewage system not be addressed.



Figure 11 Sewage infrastructure in some private homes and in the municipality was swept away (Photo Brown Motsau and David van Wyk)

According to Carin Bosman, a water specialist and former employee of the DWAF:

*Without the provision of portable toilets to everyone in the town for the duration of the period in which the wastewater treatment plant is in a state of dysfunction, there are concerns about the release into the environment of raw sewage generated from the population of around 7,000, resulting in environmental contamination, potentially disastrous ecological consequences and an increase in public health risks, including from diarrhoeal diseases.*

Bosman noted that while the sludge may not be chemically toxic, it is a:

*fine, fine silt that is extremely abrasive and corrosive...And when that slime spilled, it took the sewage works away. That is immediately an acute health risk to people. Where is all that sewage going now? Everybody is using the toilet every day. That shit is coming out of the pipes. Any waterborne disease that's associated with sewage is now the risk here. (Bega, 2022).*

The ecological system in the Kalkfontein Dam and in the stretch of river up to the dam has gone, she added:

*A lot of people use the water from that stream and from the dam for watering their livestock. Sheep can't drink that water. There's no way you can get that sludge out of the water, it will sit as sludge at the bottom of the system, which will affect the aquatic environment. The fish will probably all die. (Bega, 2022).*



The community of Charlesville is still getting water in Zozo tanks as the damage to the water pipes as a result of the tailings disaster has still not been repaired. The water in the Zozo tanks come from Bloemwater. The high levels of poverty and unemployment in the community means that consumers of water are not able to pay for it.

Tap water throughout Jagersfontein is intermittent as the local government is in arrears with water payments to Bloem Water. The water houses and tanks erected by Jagersfontein Developments are often dry, with a 30% supply from Bloem Water due to a R600 million debt from the Kopanong Local Municipality.

No one said anything about the seepage of water into the stream below the tailings. Community members are complaining that livestock are dying from drinking the water or from getting stuck in the mud. But the impact on surface and ground water is not being assessed.

Bench Marks Foundation research team tested water in the stream below the tailings, finding the total dissolved solids levels to be incredibly high.



*Figure 12 Water seeping into the stream below the tailings gave a total dissolved solids reading of 1010 part per million. World Health Organisation safe levels for water have an upper limit of 500 part per million.*

## 6.5 Health and welfare

The mayor's office indicated to Bench Marks team that HIV/Aids is out of control, that transactional sex (sex work) is rife and child pregnancies are common in Jagersfontein, given the levels of poverty and unemployment.

Residents interviewed by Bench Marks Foundation research team say that rape, child molestation, child pregnancies and HIV/Aids are rife. There has been no substantial trauma counselling and support for residents in general and children in particular.

## 7. Responses of Government and the Company

On 13 September 2022, the State President visited the disaster area, and the following [headline](#) appeared, "'We won't abandon you' – Ramaphosa stunned by Jagersfontein damage, promises to provide support".

But this is a community in which the mining operation employed less than two hundred people. One of our informants summed it up, “We had a disaster here long before the tailings dam broke. Our town is long dead. When these mine owners came in 2009, they promised to create jobs and revive our economy. Nothing like that ever happened.”

The president is repeatedly shocked, dismayed, surprised by the realities of South Africa when he ventures out of the state- and corporate-protected bubble in which he exists.

## **7.1 DMRE tries to disclaim responsibility**

### **7.1.1 DMRE says it is not a mine**

On 12 September 2022, prior to the president’s visit, the national minister of Minerals and Energy, Gwede Mantashe, visited Jagersfontein and had a meeting with the mine managers. It would seem that they convinced him that they were only sorting diamonds there and that the tailings were really the responsibility of De Beers who mined there fifty years prior. There was no explanation of how the tailings got excessively wet and overloaded, or of how the tailings grew exponentially in height and size over the thirteen years since 2009.

Mantashe informed the Portfolio Committee on Mineral Resources and Energy that this was not an operational mine. He also claimed that a De Beers High Court case in 2007 prevented his department from inspecting tailings (Evans & Dlangamandla, 2022). The Bench Marks research team were present when Tebogo Modise, Chair of the Committee, told an ENCA journalist on 22 September during a visit that the DMRE told her that the mine was not operational (Landu, 2022).

When questions were raised about the mining licence, environmental impact assessments, the environmental management plan and community consultation. the Minister disingenuously declared that it was not a mine and was therefore the responsibility of the Department of Water and Sanitation and not that of DMRE (THEUNISSEN, 2022).

This raises a number of questions about the legality of the mine:

- i) Why do other tailings remining operations, such as DRD Ergo along Main Reef Road in Johannesburg require mining permits to remine mine tailings but not Jagersfontein?
- ii) If Jagersfontein Development (PTY) Ltd is not a mine, then do they have the licenses required to own and trade in rough diamonds?
- iii) In addition to a mining right, a party wishing to conduct mining activities requires at least the following additional permits or licences:
  - a further environmental authorisation authorising in detail the listed activities that will form part of the mining and mineral processing activities, should these listed activities incidental to the operations not be covered by the environmental authorisation forming part of a mining right.
  - a waste management licence in respect of, inter alia, management of tailings.
  - a water use licence in respect of use of any natural water sources, as well as to make provision for the treatment, storage, and disposal of water in the mine itself and in tailings dams, etc; and
  - air quality licences, if required (Hayes, 2022).

Other licences depend on the nature of the mining activities to be undertaken, or the natural, social, or cultural environment where the mining activities are to take place. The most notable licences would be:

- licences for the possession, processing, and beneficiation of uncut diamonds.
- licences for the destruction or relocation of archaeological sites or graves; and
- zoning of land for mining purposes in areas subject to town planning schemes (Hayes, 2022).

Seeing that Jagersfontein (Pty) Ltd is not considered to be a mine by the Minister, then the operation does not fall under the ambit of the Mine Health and Safety Council or the requirements of the Mine Health and Safety Act, 1996 (Act 29 of 1996) which requires that any mining operation suspends all operational activities following an accident or disaster, until the operation has been made safe and is declared so by the mine health and safety inspectorate. So, the extraction of tailings could continue, regardless of the fact that it was being done in an unsafe environment.

Not surprisingly then the Mine Health and Safety Council were not involved in the disaster impact assessment following the event.

A further complication arises for the employees of Jagersfontein Development (Pty) Ltd who belong to the National Union of Mine Workers (NUM) and who have a dispute with the mine. They must be in the wrong union, given that they are not employed by a mine.

### 7.1.2 But DMRE issued a mining licence

Under the Mineral and Petroleum Resources Development Act (MPRDA), the state is the custodian of all mineral petroleum energy resources, while the resources themselves belong to the nation (the people). In line with the Act, in 2009 the Jagersfontein Community Trust (JCT) applied for prospecting and mining rights on the historic site of the Jagersfontein mine. JCT paid a R100,000 rehabilitation deposit, and a R500 application deposit, and also submitted an environmental management plan.

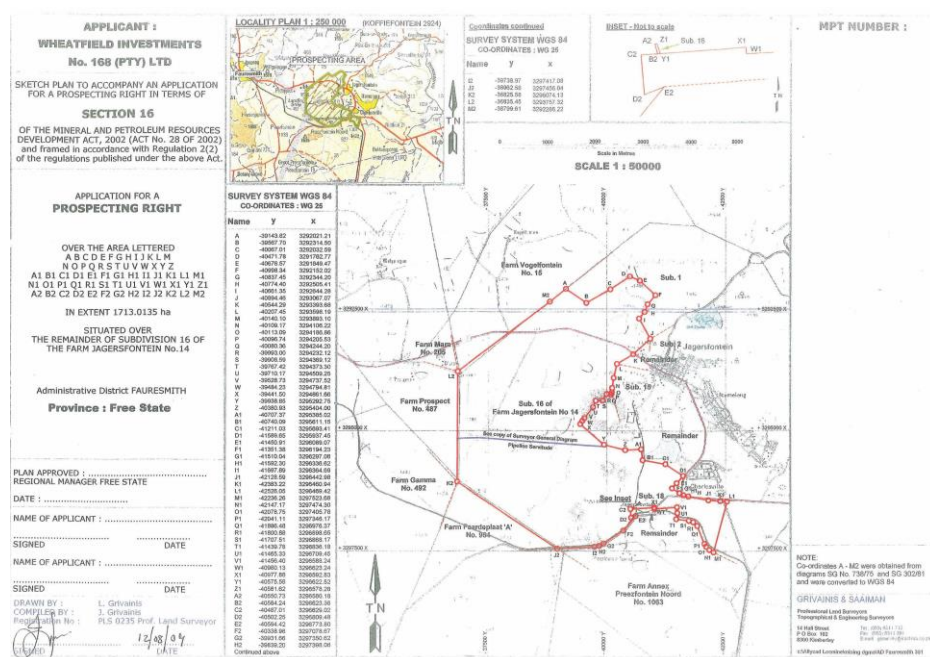


Figure 13 Map of JCT Application Area

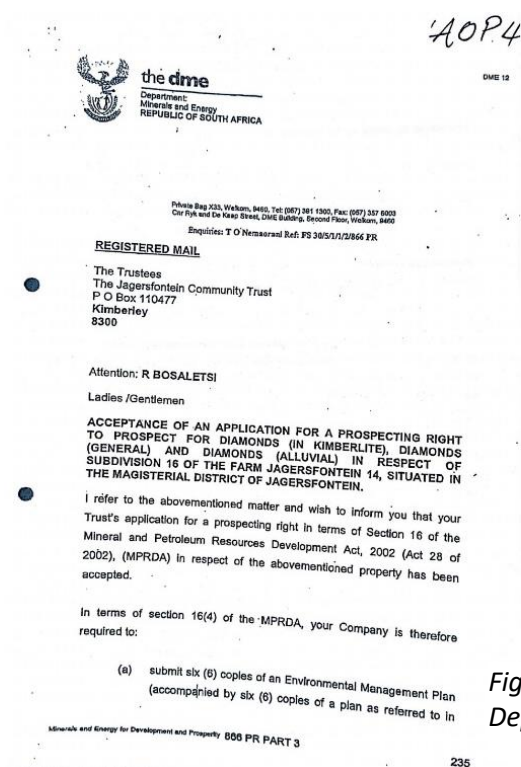


Figure 14 JCT prospecting rights accepted by (then) Department of Minerals and Energy

All of this is consistent with Jagersfontein being treated by the Department of Mineral Resources as a mine.

### 7.1.3 Who has the licence?

Despite the provisions in the MPRDA that the state is the custodian of the nation's minerals resources and must advance historically disadvantaged persons adversely affected by past mining activities, the JCT never got the opportunity to operate the mine. Instead, Superkolong, later joined by Reinet, occupied the site and began re-mining the tailings by subcontracting Sonop to extract the diamonds, in the name of Jagersfontein Development (PTY) Ltd..

Bench Marks Foundation in [Policy Gap12](#), "The Soweto Report" warned that the DMRE seems to have a bad habit of allocating overlapping licenses to different applicants, thereby confusing prospecting and operating license issues. We suspect that this is done deliberately, possibly to make community responses and engagement with mining companies difficult and confusing.



Figure 15 Photo of mayoral meeting in Itumeleng following the disaster (Photo David van Wyk)

## 7.2 Department of Water and Sanitation

### 7.2.1 No dam safety licence

No matter who was authorised to exploit the mine, according to a *Mail and Guardian* report, Sputnik Ratau, spokesperson for the Department of Water and Sanitation, confirmed that Jagersfontein Developments was not issued a dam safety licence (Bega, 2022).

*Bosman alleged that Jagersfontein Developments “acted unlawfully” in that it did not have a dam safety permit. The safety permit is the licence you get to prevent your dam from killing people. Any dam that contains more than 50 000 cubes of water and has a height of a wall of more than 5m must have a dam safety permit. This dam that spilled is certainly higher than 5m and way more than 50 000 cubes. So, they should have had a dam safety permit before they started to dispose of more than one drop.*

Yet, the Superkolong, Reinet and Sonop took over the site and began processing the tailings, as Jagersfontein (Pty) Ltd, for diamonds without any licenses to do so.

2022 and 2023 highlighted the inconsistencies of the Department of Water and Sanitation (DWS). As custodian of South Africa’s water resources, the DWS is mandated by the National Water Act (36) of 1998 to ensure that our water resources are “protected, used, developed, conserved, managed and controlled” in a sustainable and equitable manner. This law among others provides the rules of the game for water users as the players and DWS as the referee (Smit, 2022).

The consumption, processing and recycling of water is dominated by the private sector and the state. The private sector includes players like agriculture, mining, and industries, while municipal bulk water and wastewater treatment plants mostly belong to the state. The regulatory environment is the same for both, and both must comply with the requirements for admission (i.e., be authorised or licensed) and to the rules (licence conditions). It is the job of the Department of Water and Sanitation (DWS) as referee to ensure legislative and regulatory compliance.

After the Jagersfontein tailings dam collapse in September, DWS spokesperson Sputnik Ratau, formerly a senior employee of the Department of Minerals and Energy (Ratau, 2007), revealed that the Jagersfontein compliance audit in 2019 highlighted irregularities which needed to be addressed, including the storage of excessive tailings volumes, which resulted in a directive being issued in December 2020. The DWS noted that the incident also caused pollution to the environment and water resources and has threatened people's livelihoods (Steyn, Free State dam disaster: Criminal case to be opened against Jagersfontein Developments, 2022). Following further investigation, it was reported that Deputy Minister of DWS, David Mahlobo, intended to lay criminal charges against the owners, Jagersfontein Developments for non-compliance with its water use licence (Smit, 2022).

Ironically, just a week later, News24 revealed that 15 of the country’s 20 largest dams were not compliant with safety standards either. This implies the widespread possibility of potentially catastrophic dam failures in different parts of the country during the rain season. Given the impact of global warming and the ever more frequent occurrence of catastrophic super storms, this poses a real hazard to people living on the wrong side of mine tailings (Smit, 2022).

As a result, DWS took a decision to implement administrative enforcement measures and issued a directive dated 12 September 2022 in terms of Section 20 of the National Water Act.



**Reply to Question NW320 to the Minister of Water and Sanitation, 7 March 2023**

*a) The Department of Water and Sanitation issued a directive to Jagersfontein Developments (Pty) Ltd on 12 September 2022, in terms section 20 (4) of the National Water Act (NWA), 1998 (Act No. 36 of 1998), relating to control of emergency incidents. Amongst other issues, the directive requested rehabilitation of all the affected areas from the Wolwas dam in the Proses Spruit and from the dam downstream towards the confluence of the Proses Spruit and Kromellenboog, downstream to the confluence of the Kromellenboog and Riet Rivers and into the Kalkfontein Dam.*

*Jagersfontein Developments (JD) has since submitted the incident and rehabilitation plans to DWS which were evaluated and sent back for corrections and improvements in October 2022. The rehabilitation action plan was resubmitted to DWS in December 2022 and DWS has provisionally accepted the plan with the view that the updated plan will be submitted after the appointment of additional specialists as stated in the response submitted in December 2022 by JD. The DWS is continuing to monitor progress regarding the implementation of the rehabilitation plan which has already commenced.*

*Further to that, the department has opened a criminal case with the Jagersfontein South African Police Services (SAPS) against the owners of Jagersfontein Mine, Jagersfontein Development, for possible contraventions of Section 151(1) (f) & (i) read with Section 1 and 151(2) of the NWA. The DWS is also in the process of appointing a panel of tailings experts to carry out an independent forensic investigation on the causes of failure of the tailings storage facility (TSF). The final report of the forensic investigation will be made available to Parliament.*

*b) The Department issued a Dam Safety directive in terms of section 118 of the NWA, compelling Jagersfontein Development (JD) to decant Compartment 2 which still had fine tailings to prevent a secondary failure of the TSF. In addition, JD was directed to appoint an Approved Professional Person (APP) to oversee and advise the mine on the safety and operations, including but not limited to decanting Compartment 2 of the TSF at an appropriate rate to safeguard the risk of failure of the said compartment. The APP appointment was approved by the department's Dam Safety Office (DSO). The DWS is not able to respond on the query regarding the rebuilding of the houses. We are requesting the Honourable Member to redirect this question to the Department of Human Settlements.*

*The directive issued by DWS pertained to the release of a substance (slime/mine process waste materials) that polluted or had the potential to pollute or had a detrimental effect on a water resource and contains the required actions that the responsible person had to undertake in order to remedy the effects of the incident (Steyn, Free State dam disaster: Criminal case to be opened against Jagersfontein Developments, 2022).*

### **7.3 Portfolio Committee on Water and Sanitation**

The following is taken from [the summary](#) of Dams' safety and status of tailings dam across the country: DWS briefing; with Minister and Deputy Minister, 1 November 2022:

*The Portfolio Committee on Water and Sanitation convened in a virtual meeting to hear from the Department of Water and Sanitation (DWS) about dam safety. The DWS outlined the ways in which dams were categorised in South Africa according to their hazard potential. The presentation only gave figures on water-retaining dams, not on tailings dams. It revealed the number of dams registered as having a safety risk and that dam safety evaluations had fallen significantly behind schedule...*



*Some Members felt that the report on dam safety was being presented to the Committee as a reaction to the Jagersfontein incident, and this was due to a lack of oversight from the Committee. They asked about the Department's liability, and whether it would be able to claim from the mine for the damage. They also questioned why the Department of Mineral Resources and Energy was not involved in the Jagersfontein matter. Other issues raised by the Committee covered delays in dam construction projects, identifying and dealing with illegally constructed mines, and ensuring that potable water met the required standards...*

*The DWS should collaborate with its sister department, the DMRE, to resolve matters such as that of the Jagersfontein disaster. The dam had fallen apart, and it was a matter for the DMRE. It was important for the DWS to form collaborations with other departments to resolve matters of dam safety...*

*The Jagersfontein dam's level of storage capacity and its height were brought to the dam safety office's attention in December 2021. At the time, the dam was not registered as a dam that was a safety risk. After looking at the storage and height level, the Department became aware of the dam not being registered and meeting the requirements to be classified as a dam with a safety risk. It immediately engaged the engineers representing the mine to inform them of the requirements. The dam was consequently registered and classified in April 2022. Unfortunately, before more work could be done on the dam, classified as Category 3, the unfortunate incident of September 9-11, 2022, happened...*

*Following the Jagersfontein incident, the DWS appointed an independent panel of experts to conduct a forensic investigation into the cause of the Jagersfontein dam's failure. The report would form part of the prosecution processes. The DWS would like to treat the report as an independent report, without the involvement of either the DWS or the mine.*

There has still not been any report from the official investigation.

*The Chairperson, Mr Zwane, reminded the DWS that there was a question about the legal options that the DWS could pursue to sue the mine in Jagersfontein...*

*Mr Zwane said that the DWS may have a claim. The claim would be contingent on the damage caused downstream, the infrastructure lost, and whether the mine had been compliant. The investigation was being conducted by MVD Kalahari Consulting, which was a private company, to see whether Jagersfontein met the requirements. That might initiate a class action case. The DWS knew little about the MVD Kalahari Consulting company...*

*The Bloemfontein High Court's ruling was not saying that the DWS should not be involved, only that DMRE should not be involved. The old tailings dams did not require new mining rights, so the DMRE was not supposed to be involved. The DWS was involved as water use activities were involved in processing the minerals. Another licence had to be obtained during the transportation to the mine's storage facility. The licence was according to the National Water Act Section 21 (g).*

## **7.4 Cooperative Governance and Traditional Affairs**

On 7 August 2023, community members and their legal representatives were informed that Mr Parks Tau, Deputy Minister of Cooperative Governance and Traditional Affairs (CoGTA), intended to meet with victims and their attorneys the next day to assess progress since the visit of the Deputy President in May. The lawyers took strong exception to the short notice and to the tendency of state representatives to meet with their clients without the lawyers being present. They pointed out that there were numerous concerns about inclusivity and the confused process adopted by the government.

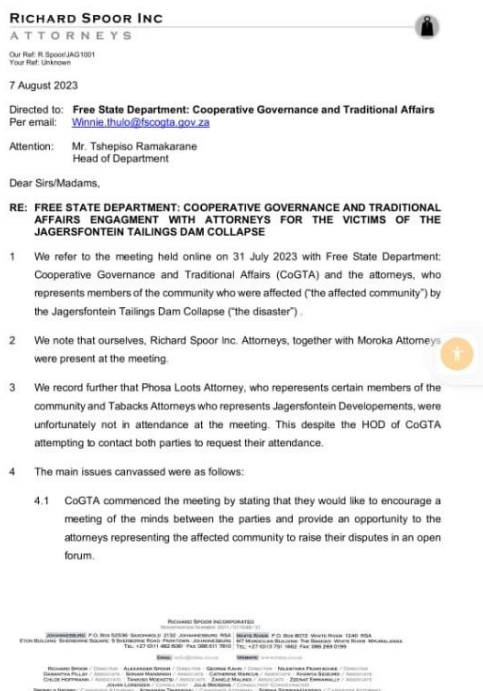


Figure 16 Letter from Richard Spoor Attorneys to Free State Department of Cooperative Governance and Traditional Affairs

In an interview with the mayor's office on 31 July, the mayor and his secretary complained about the lack of coordination between the three spheres of government and different government departments and the poor communication between government, the mine, and the community.

## 7.5 The South African Human Rights Commission

The South African Human Rights Commission (SAHRC) visited the site of the disaster on 12 and 13 September 2022, two days after the disaster. It made a press release and commended relief efforts.

In the first week of October, the SAHRC appeared before the Parliament Portfolio Committee on Mineral Resources and Energy where it noted that:

*Mining communities have been raising environmental concerns regarding underlying negative impacts of mining activities in their areas for a long period of time. While the commission continues to monitor the implementation of the relief efforts, it also welcomes reported commitment to a full investigation by the government to establish the cause of the collapse. The investigation is also expected to identify and recommend preventative, corrective and accountability measures to address this disaster. (SAHRC, 2022)*

The SAHRC further noted that:

*The Commission remains concerned about the continued impacts on the environment and to communities associated with the extractive industry. These concerns were to some extent ventilated in its reports into the Underlying Socio-Economic Challenges on Mining-affected Communities in South Africa (2018), following extensive national hearings conducted during 2016. The recommendations by the Commission regarding the safety hazards posed by unused and neglected mines to children and communities in their surrounds is but one issue of concern flagged by the Commission in its report. Noting with particular concern that the direct impacts to property and security are not isolated adverse impacts, but extend to a number of related human rights, including the provision of alternative housing, food, water, healthcare, access*

*to schools, access to a safe and healthy environment and other concerns of the affected victims. The Commission intends engaging with the mining company, the community and government to find short term to long term solutions to support efforts toward the protection of human rights. (SAHRC, 2022)*

## 7.6 The Company

Following a meeting with Mineral Resources Minister, Gwede Mantashe, the legal compliance officer for Jagersfontein Developments (Pty) Ltd said that “the company would take full responsibility and accept liability following the collapse of a mining wall dam in the town on Sunday... I am not going to refer to this as a mine, but it is a processing facility. The processing facility must accept liability that comes with the operations and with the break of the mining wall dam collapse in the town”. (Pijoos, 2022).

The managers met with the minister, but ten days after the disaster they still failed to meet with the distressed impacted communities. The temporary housing for those whose houses were destroyed and washed away took them to a holding shelter some 120 km away on the N1 national road between Bloemfontein and Kroonstad, as far away from the media as possible.

The victims could not go into their ruined houses to recover the little that could be recovered. As a result, community members feared that what was left of their houses and belongings in Charlesville and Itumeleng would be further plundered. They also felt cut off from family members and the rest of the community that remained behind, who could have provided solace and support. In addition, the victims were effectively separated from the media which made it difficult to get clear firsthand accounts of events to the public at large. And the victims could not get easy access to legal representation. According to residents we spoke to from both communities they were told by mine management of government officials not to speak to the media or “to outsiders.”

Some days after the disaster, a truck arrived daily and dumped a load of oranges on the pavement next to the road in Charlesville, with no attempt to package or distribute the oranges in an orderly manner. The researchers also found no evidence of food parcels distributed in the community. Community members expressed their disgust at this: “These oranges are from Johan Rupert’s orchards”, claimed an old female pensioner; “these people have no respect for us; they throw food on the floor as if we are animals”.



Figure 17 Photo of oranges dumped on the pavement of Charlesville (Photo David van Wyk)

The research team phoned the compliance officer for a company response, his number was relayed to his secretary. She attempted to divert the call directly to him, but he failed to pick up. She then took the email address of the lead researcher and promised that he would respond in writing. He never did. The managers were noticeable by their absence from community meetings held by the state, from the level of the president, right down to the level of the mayor.

Jagersfontein Development (Pty) Ltd claimed at the time that the wastewater was not hazardous.

The community has not been informed about how the remainder of the tailings, particularly the eroding corner above Itumeleng township, is being made safe. To the casual observer the tailings are being removed or “hollowed out” from behind, leaving the risk of it collapsing into Itumeleng with the first heavy summer rainstorms.

In interviews with the office of the mayor and members of the community, Bench Marks Research team was informed that:

- i) Mine management is not consulting with the community post disaster.
- ii) The representatives of the mine held separate one-on-one reparations meetings with households that lost all their belongings. They were made to sign forms absolving the company from any further liability, in return for the company replacing their lost houses. “They say nothing about replacing our lost belongings, our cars, furniture clothes;”
- iii) Community members lost livestock, cattle, sheep and pigs; there is no reference to the loss of these animals.

The mine is holding victims to ransom. If they don't sign papers to clear the mine against any court action, the mine will not rebuild their houses. This is a form of blackmail.

## **7.7 Who should pay?**

On Tuesday 27 September, the government announced that it will build houses for those whose houses were destroyed in the disaster. The immediate questions which arise are:

- Why is the cost of the disaster externalised to the taxpayer?
- Why are the owners not forced to build those houses?
- Why is the ‘polluter pays’ principle not applied?
- Is anyone going to be prosecuted for this entirely avoidable mess?

## **8. Promises from government and the company**

### **8.1 Response of the company**

The first email response from the company which owned the mine, Stargems from Dubai, which bought Johann Rupert’s shares, read: "A full due diligence was conducted prior to this acquisition, showing that the assets, including the dam, were safe and secure". It promised to “donate” R20 million to the impacted communities (Njinji, 2022). Clearly, the due diligence must have been very shoddy.

Twenty million rands will not afford the price of one upmarket house in the leafy suburbs of Johannesburg or Cape Town. The Chamber of Mines offered another fifty million rands, and combined,



these figures will not nearly repair the damage caused. Bench Marks Foundation, in agreement with several lawyers representing victims, suggests that the damage would exceed R150 million.

In early May 2023, eight months after the disaster, Jagersfontein Development (PTY) Ltd had only spent R100 000 of the availed R20 million (EWN, 2023).



*Figure 18 The remaining corner of the Jagersfontein dam wall above Itumeleng*

## 8.2 Jobs

The Deputy President visited Jagersfontein on 10 May 2023, eight months after the disaster. During the visit, Free State premier Mxolisi Dukwana promised residents in the Xhariep district municipality that more than R15bn in investment will create jobs in the area (Central News, 2023).

The delegation also met the mine management, who reiterated their commitment to take full responsibility for the losses suffered by the community and vowed to be at the centre of restoration and rebuilding.

The provincial government promised to launch two mega projects in the district. The first is a solar power plant expected to bring an estimated 6,000 jobs in Xhariep. The owners of the solar farm will be a South Korean firm. While the solar project might be labour intensive in the construction phase, solar farms once operational do not require much labour. The solar project will not be in Jagersfontein.

The second is a hemp/cannabis industrial site to manufacture textile, medicinal and hygiene products, the location of which is not clear at this stage (Business Day, 2023). Both Itumeleng and Charlesville township roofs could be solarised to allow indigent households in these communities to sell electricity into the national grid, thereby getting free electricity while generating an income for themselves.

None of the job creation initiatives speak about the beneficiation of diamonds in Jagersfontein, such as cutting and polishing or jewellery design and manufacturing.

It is clear that the Jagersfontein operation is very profitable. However, the local community derives no benefit from the operation.

Houses are currently being repaired by a subcontractor paid for by the mine. The subcontractor is from Limpopo and the community is angry because the reconstruction is offering them no jobs or economic opportunities.

### 8.3 Agriculture

The provincial department of agriculture has earmarked R4m for agriculture in Kopanong. The funds will be directed to assisting small-scale farmers who lost livestock, animal feed, water reticulation and fencing according to the provincial government.

Bench Marks Foundation interviewed small scale farmers who lost cattle and they indicated that no one has approached them about replacing their livestock. The Bench Marks team found the ruins of a substantial bakery, an abattoir, a dairy and a railway station, all agriculture-related infrastructure, not ruined by the tailings disaster but by decades of mismanagement and urban decay.



*Figure 19 Photo of dead cow on poisoned land*

### 8.4 Substance Abuse

To mitigate against drug and alcohol abuse and other social ills in Jagersfontein and surrounding areas, it was also announced that the Department of sport, Arts and Culture will build a multipurpose centre in Kopanong.

### 8.5 Project and Skills Development

In a memorandum submitted to the Deputy President, the community demanded the establishment of a project management team. The Deputy President agreed to establish such a project management task team, comprising deputy ministers, MECs, mayors, municipal officials and experts who will meet regularly and oversee implementation of deliverables.

He also said that a skills development institution to develop and upskill the youth is planned to empower the communities and to be a place of economic activity that has full control of the entire value chain. Through education we will solve our own problems here at home.

What is puzzling is that there is no indication that an audit of available infrastructure or community skills will be done. There are also ruins of sport and recreation facilities such as a swimming pool, tennis courts, club houses and dance halls. This is in addition to many buildings of great historical and therefore tourism value.



## 9. What do the law, regulations and global best practice say about tailings management?

### 9.1 Applicable laws and regulations

Mining in South Africa is regulated by the Water Act 1998, the Minerals Act 1991 and the Mine Health and Safety Act 1996. The DMRE is responsible for implementing the provisions of the Acts. [Jones & Wagener](#), engineering and environmental consultants working on tailing management, are clear:

*South African legislation requires that mine residue deposits (MRDs, tailings storage facilities, tailings deposits, or slimes dams) be managed over their entire lifecycle by appropriately qualified persons, often Professional Engineers, so that they do not pose unreasonable risk to the public and the environment.*

[Tailings.info](#) is a website that was “developed alongside a PhD thesis submitted at the University of Leeds in 2006 by Jon Engels.” Its section on South Africa summarises the regulatory system for tailings management as follows:

*The principal management guidance document for tailings facilities in South Africa is the Code of Practice for Mine Residue Deposits, published by the South African Bureau of Standards in 1998. The standard referred to as the South African Bureau of Standards [SABS] 0286:1998, later renamed to SANS 10286, contains fundamental objectives, principles, and minimum requirements for best practice, all aimed at ensuring that no unavoidable risks, problems and/or legacies are left to future generations.*

*The standard was developed because of a major tailings’ impoundment failure in Virginia in the Free State in February 1994. The tailings escaped into the suburb of Merriespruit, killing and injuring people as well as causing vast environmental destruction.*

*The standard does not address the environmental issues or health and safety concerns of tailings storage, but places more focus on the need for management throughout the life cycle of a tailings management facility. It was initiated primarily to address safety concerns related to structural failure of a tailings management facility and how to prevent this from occurring.*

*The key principles on which the SABS standard is based are the following (taken from SANS 1998):*

- *Continual management – stressing the importance of ongoing management attention.*
- *The minimisation of waste and the impacts of waste – the steps that should be taken to reduce the amount of waste produced and the impact of its disposal.*
- *Precautionary principle – a conservative approach where risk to human health, property or the environment exists.*
- *Internalisation of costs – detailing the full cost of satisfying the requirements of the standard, reiterating that this should not be avoided by neglecting safety, health, or the environment.*
- *Assessment of the full life cycle implications – stressing that waste disposal should be seen in the context of the entire mining process, and the need to rehabilitate for sustainable land use after it has ceased.*

*Tailings management in South Africa is regulated by law in the Guideline for the Compilation of a Mandatory Code of Practice on Mine Residue Deposits issued by the DMRE in 2000. This guideline makes implementation of a code of practice mandatory for each tailings facility with compulsory adherence to SANS 10286, Code of Practice for Mine Residue Deposits. In July 2015, the Mining Residue Regulations was established by the Department of Environmental Affairs to control mine waste dumps, stockpiles, and tailings storage.*

## **9.2 International best practice**

### **9.2.1 UN Economic Commission for Europe**

According to the law, regulations, and global best practices (United Nations Economic Commission for Europe, 2014), with planning and designing a safe tailings dam facility, particular attention should be paid to the following:

- a) The tailings pond, for which the following parameters need to be assessed accurately:
  - i. The stability of the tailings (or other deposited material such as water treatment sludge).
  - ii. The geological situation.
  - iii. The hydrogeological situation.
  - iv. The hydrological situation.
  - v. The geophysical situation.
- b) The tailings dam, for which the following parameters need to be assessed accurately:
  - i. The slope stability of the dam.
  - ii. The strength and stability of the foundation for the dam.
  - iii. The stability of the tailing material (induced liquefaction).
  - iv. Erosion to the dam (suffusion and outside erosion).
  - v. Water recovery systems.
  - vi. Emergency spillways.
  - vii. Slope sliding.
  - viii. The tailings delivery system to and on/around the tailings dam facility, which should take into consideration safety and environmental protection.

The dam-raising method should be chosen for local conditions (e.g. seismicity, tailings composition, severe climate). Special attention must be given to quality control and site supervision during the starter works construction phase of the tailings dam. Additional impoundments should be designed to contain inflow from emergency outlets. Hazardous substances and process water should be reused as far as technically possible (recycling). If it is impossible to recycle hazardous substances, they should be neutralised before being discharged into the tailings dam facility (United Nations Economic Commission for Europe, 2014).

### **9.2.2 Earthworks**

[Earthworks](#), a US organisation focused on mineral and energy development and fighting “for clean air, water and land, healthy communities, and corporate accountability”, published ten guidelines as “must do” steps in ensuring tailings safety:

- 10: Ensure independence of reviews to ensure safety*
  - 09: Appropriate monitoring systems must identify and mitigate risk*
  - 08: Ensure detailed evaluation of dam foundations and tailings properties*
  - 07: Implement rigorous controls for safety*
  - 06: Mandate the use of Best Available Technology for tailings, in particular filtered tailings*
  - 05: Any potential loss of life is an extreme event and design must respond accordingly*
  - 04: Ban upstream dams at new mines and close existing upstream facilities*
  - 03: Ban new tailings facilities where inhabited areas are in the path of a tailings dam failure*
  - 02: Consent of affected communities*
  - 01: Make safety the guiding principle in design, construction, operation, and closure*
- (Ellis, 2022).

### **9.2.3 Moir and Adamson**

In 1949, A.T. Moir contributed a part to a book titled *Bold Metallurgy on the Witwatersrand, Part 4 – Slime Residue Disposal Dams*. In 1972, R.J. Adamson edited a follow-up book, *Gold Metallurgy in South Africa*, in which best practice in tailings (slimes or slurry) management was reemphasised. Despite the gap in time, both authors concurred in their findings, which can be summarised as follows:

- 1) Tailings should not be constructed on wetlands.
- 2) Tailings should not be constructed on slopes.
- 3) Tailings should not be constructed in proximity of towns, townships, or critical infrastructure such as electricity supply networks and substations, roads, and bridges. There should be an exclusion zone of between 500 m and 1 500 m.
- 4) Townships, housing, and public amenities should not be constructed in close proximity or downstream or downhill from tailings.
- 5) Tailings should not be constructed near public institutions such as schools and hospitals or government offices.
- 6) Tailings should not pose a threat of seepage or flooding into otherwise unpolluted surface water or groundwater.
- 7) Attention should be paid to the gradient of tailings dams. Too steep tailing gradients pose a threat of collapse.
- 8) Attention should be paid to the height of tailings dams. Tailings dams that are too high pose a threat of potential collapse.
- 9) Attention should be paid to the outer retaining walls of tailings. These should be firm, strong, and dry.
- 10) Attention should be paid to dust mitigation from tailings as most tailings contain arsenic and silica, and in most diamond mines it contains asbestos. Therefore, tailings should be vegetated to not only contain windblown dust but also to bind and strengthen the tailings.
- 11) All tailings should be fenced, sign-posted and secured. There should be no unauthorised public access to tailings.

### 9.2.4 Chamber of Mines Code of Practice

Based on both experience and on research by the Council for Scientific and Industrial Research, a Code of Practice has been drawn up by the Chamber of Mines of South Africa as a guide to mining companies for the construction of slimes dams and the condition in which they should be left at the time the mine ceases operations. In addition, the Chamber of Mines has established a Vegetation Unit whose function is to establish vegetation on the tops and sides of disused (tailings) dams to prevent erosion by either wind or rain (Adamson, 1972:153).

The current Minerals Council South Africa, which replaced the Chamber of Mines, no longer has a tailings vegetation unit. The rest of this report demonstrates how the Jagersfontein operation failed to comply with the above requirements for safe tailings.

### 9.2.5 Fraser Alexander

J.A. Wates of Fraser Alexander notes ten safety rules for upstream tailings in South Africa

1. A sufficiently wide beach, relative to the ultimate height of the dam, must be maintained to form a strong, wide, drained (unsaturated), and/or dilatant (non-contractive) outer shell (prism).
  2. The prism upon which the stability of the dam relies must not be compromised by underlying tailings that are contractive or weak which, when subjected to excess strain or seismic loading, can either weaken or liquefy to the point where the factor of safety is insufficient.
  3. The prism must be of sufficient width to retain “bursting pressures” (Casagrande & McIver 1970) of the contractive tailings that may be located upstream of the prism.
  4. Where the tailings prism is relied on to provide stability, the rate of raising of the dam must be sufficiently slow, such that there is a sufficient dissipation of excess pore pressures and desaturation in the supporting prism.
  5. There must be sufficient underdrainage (drainage blanket, finger drains, etc) and/or a pervious foundation to maintain the prism in a drained and desaturated condition, and to prevent seepage from issuing from the face of the tailings dam.
  6. Design analyses must include both undrained strength analysis and effective stress analysis, with design controlled by the analysis type that best represents the anticipated behaviour of the tailings. A wide range of factors, including material type, degree of consolidation, loading rate and stress path, must be assessed in selecting the appropriate analysis method.
  7. A high degree of regular performance monitoring, reviews and ongoing involvement by the designer (or another engineer formally appointed to assume this role) is essential to confirm that design intent is being satisfied.
  8. Conventional upstream dams cannot be considered for areas of moderate seismicity without improved upstream construction, involving a combination of compaction or other means of densification (such as desiccation) of the outer shell and good internal drainage. Upstream dams should not be considered in areas with high seismicity.
  9. The design must be consistent in terms of design requirements (e.g., minimum beach width) versus operational requirements (e.g., pond size required for clarification, storm storage and freeboard). The geotechnical design of upstream tailings dams should not be carried out in ignorance of operating constraints.
  10. Seepage conditions within the dam must be well-defined, requiring a good understanding of hydraulic properties, pore pressure profiles and hydraulic gradient
- (Wates, 2023; Wates, 2023)

## 9.2.6 Water and Sanitation Department

The Water and Sanitation department has the power under section 19 of the Water Act to take whatever action is necessary to prevent pollution from spreading, to contain the pollution or to remedy the effects of pollution. This includes claiming the money spent fixing the environmental impact from whoever was responsible for the disaster (Bega, 2022).

## 10. Findings

The Bench Marks Foundation research team presents the following findings:

- 1) The Jagersfontein tailings dam was constructed on top of a shallow aquifer.<sup>2</sup> Shallow aquifers make it impossible for the tailings to dry out, weakening the dam from its base. The design of the tailings dam on a shallow aquifer was a factor in the liquidity, instability, and inevitable collapse of the tailings.

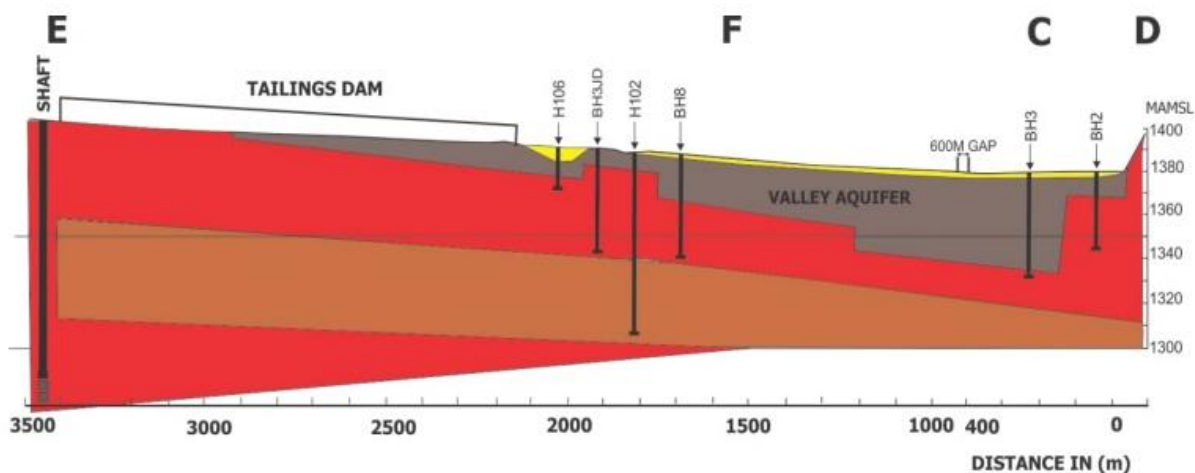


Figure 20 South-west to north-east cross-section of the Jagersfontein tailings (adapted from a desk study by Colliston, 2021)

Figure 20 above shows that the Jagersfontein tailings lies directly on top of the shallow Valley Aquifer. The aquifer and water table surfaces are exactly underneath the highest and therefore most stressed/pressured northern retaining wall of the tailings. It was thus not a matter of if the tailings would break, but when.

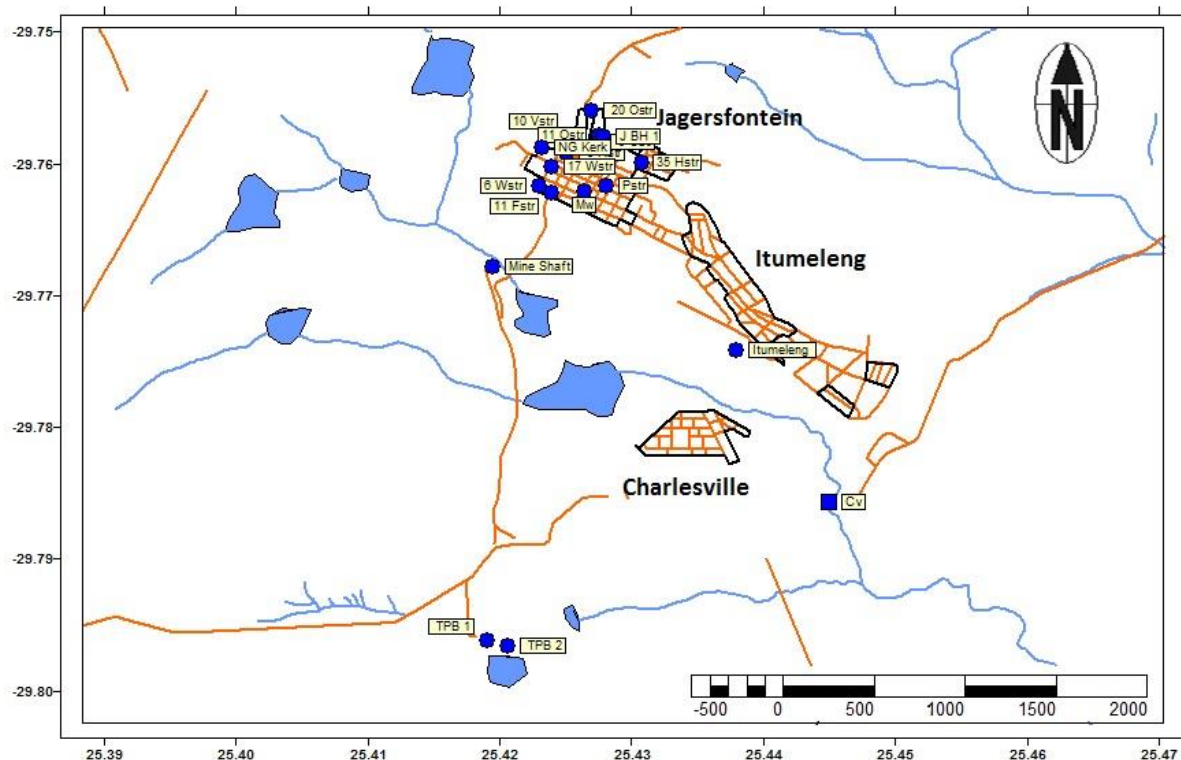
- 2) The Jagersfontein tailings dam was constructed at the confluence of three of four catchments into a tributary of the Proses River, which is a tributary of the Vaal River. This poor location of the tailings dam further increased the liquidity and instability of the tailings. The tailings dam is located below a number of normal dams upstream.

<sup>2</sup> An aquifer is an underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials. Groundwater from aquifers can be extracted using a water well.





Figure 21 Location of tailings dam in relation to water catchments (blue arrows)



*Figure 22 River catchments converge at the tailings dam. This indicates poor planning, environmental impact assessment and environmental management by the mine, and absolute failure by the Regulator (Adapted from Hoon, 2013)*

- 3) The dam wall was constructed by the unsafe upstream method. This failed to ensure sufficient stability of the dam wall.
- 4) Sludge was being pumped into the dam from the processing operation. This led to severe overloading with signs of spillage over its steepest wall, also called the rim. This should have alerted the owners of the rim's inevitable collapse.
- 5) There were many warning signs, from employees, the community and government, that the dam was in danger of catastrophic failure. These were ignored by the company and the relevant government departments.
- 6) The gradient of the tailings dam and the continuously growing height of the dam wall posed a danger of the collapse which ultimately took place. Tailings dams that are too high pose a threat of potential collapse.
- 7) The dam was constructed on a slope with two township communities directly below it. Given its instability, the downward slope on which it stood increased the force of the surge once it collapsed, contributing to the destruction of property and infrastructure below it. Typical of apartheid urban planning and space allocation, the former white town of Jagersfontein was constructed above the mining operation and its tailings. It was the black townships of Itumeleng and Charlesville which were constructed downhill and downwind of the tailings, below the steepest gradients. This contributed to the devastating effect of the breach in the dam wall.



Figure 23 Annotated photograph showing the slope and gradient of the tailings and the location of the two townships (Adapted from Google Maps)

- 8) The proximity of the dam to critical infrastructure exacerbated the damage caused by the breach of the dam wall. When the tailings dam wall broke, the slurry swept away the electricity substation feeding the town, swamped the sewage works and halted water supply. It also swept across the R704 in three separate places.



Figure 24 Remains of the electricity substation of Jagersfontein (Photo credit David van Wyk and Brown Motsau)

- 9) Failure to observe safe exclusion zones of between 500m and 1,500m around the tailings dam exacerbated the damage. The offices of the South African Social Security Agency (SASSA) in Charlesville came close to disaster, as did some schools in Itumeleng. The R704 provincial road



linking Jagersfontein to Bloemfontein is below the tailings and less than 100m from it. The nearest houses in Charlesville are less than 250 m away from it.

- 10) The location of the dam uphill from unpolluted surface water and groundwater caused additional damage to the environment. The surge ended up in the Proses River, ten kilometres downstream from Jagersfontein. The Proses River feeds into the Vaal River before it merges with the Xhariep River. Locals reported dead fish along the banks of the river.



*Figure 25 The Proses River. The fish leapt out onto the banks to escape the tailings mud. Photo credit David van Wyk and Brown Motsau*

- 11) Reports indicate that the collapse of the old historic open-cast pit<sup>3</sup> caused seismic disturbances (vibrations of the earth) which could have contributed to the collapse. “The Pit has an extent of 19.635ha and is a near vertical sided hole, with some of the faces being more than 200m in height. It is unstable and poses vibration risks. The Pit's instability presents a very serious safety risk, placing local residents at potential risk in the long term” (Turn 180 Environmental Consultants [hereafter Turn 180], 2018).
- 12) There is no indication that there was ever any attempt to plant vegetation on the tailings walls. The coughing and respiratory problems experienced by residents in Charlesville and Itumeleng demonstrate the harmful effects of failing to plant such vegetation.
- 13) The response of the DMRE was focused on attempting to escape blame rather than to take responsibility for mitigating the results of the disaster. Its refusal to acknowledge that Jagersfontein is a mine has led to production continuing without regard for the safety of the dam.
- 14) The Department of Water and Sanitation correctly identified problems with the tailings dam but were ineffectual in imposing any preventive measures.
- 15) The finance for restitution offered by the company and the Minerals Council of South Africa is inadequate to fund full restitution.

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<sup>3</sup> Open-cast or open-cut mining is a surface mining technique of extracting rock or minerals from the earth from an open pit.

## 11. Recommendations

### 11.1 For the mining company

1. Completely remove the tailings from their current location, and immediately stop all mining and processing activities until this has been done.
2. Meet immediately, and thereafter regularly, with the Jagersfontein Multi-stakeholder Mining Forum to discuss the extent of the disaster resulting from the criminal negligence of the mine, its impact on the community and the restitution required from the company.
3. Provide the Jagersfontein Multi-stakeholder Mining Forum with copies of the Environmental Impact Assessment (EIA), the Environmental Management Plan (EMP) and the Disaster Management Plan for the mine, and the details of the consultants involved in drawing up these documents.
4. Dismiss those responsible for the non-compliance of the tailings dam with the law, regulations and global best practice.
5. Take full responsibility for the death and destruction that resulted from the disaster and, according to the polluter pay principle, timeously and fully compensate and give full restitution to those affected.
6. Open charges against the compliance officer and the consultants who drew up the environmental impact assessment, the environmental management plan and the construction and oversight of the tailings for gross negligence and failure to disclose the obvious problems with regard to the location, construction, and management of the tailings.
7. Demand that the consultants be deregistered as accredited consultants in environmental management and planning.
8. Implement the Social and Labour Plan for the mine and conduct an independent audit of its Social and Labour Plans since mining re-started in 2011.
9. Negotiate future Corporate Social Responsibility projects and programmes with a fully functional Jagersfontein Multi-stakeholder Mining Forum.
10. Contribute to the development of a local economic development strategy for the community of Jagersfontein and Kopanong Local Municipality, This strategy should profile possible economic opportunities for the Jagersfontein community. It should include regulation of the company's procurement processes to prioritise procurement from local businesses.
11. Adhere to the best practices in tailing management by committing to implement the [Global Industry Standard on tailing management](#) (GISTM) and commit to zero harm in the life cycle of its tailings facility. In addition to GISTM, commit to embracing other helpful standards such as Safety First Guidelines for responsible mine tailing management.

### 11.2 For national government

1. Make and enforce regulations which prevent the construction of tailings dams on wetlands, and which regulate the slope allowed on which dams may be built.
2. Make and enforce regulations which prevent the construction of tailings dams by the upstream method.



3. Make and enforce regulations which prevent the construction of dams near to critical infrastructure and public buildings.
4. Make and enforce regulations which prevent the construction of tailings dams uphill from unpolluted surface water.
5. Make and enforce regulations requiring mining companies to plant and maintain vegetation on dam walls.
6. Ensure that health and safety inspections occur at this mine and all mines as required by law, and that this mine and all mines have a disaster management plan, complete with a community engagement plan for raising awareness of the details of the disaster management plan.
7. Install a dam hotline in the Department of Water and Sanitation to allow members of the public to raise concerns about the condition of any dam.
8. Dismiss the officials in the DMRE, the Department of the Environment, and the Department of Water Affairs who approved the environmental impact assessment and environmental management plan for this mining operation.
9. Fully capacitate the division of the mining inspectorate, ensuring all vacant posts are filled, and ensure regular inspections of tailings and other hazardous mine waste management activities.
10. Apply the polluter pays principle and force the company involved, through appropriate legal action, to pay for the damages caused through its negligence.
11. Amend the regulatory requirements to include community consultation throughout the life of the mine and community participation in all mine disaster management units, assessments and planning, environmental management impact assessments, planning and compliance oversight and adherence.
12. Amend the Minerals Petroleum Resource Development Act (MPRDA) to prohibit mining companies from selling non-profitable mines; instead, they must be required to close and properly rehabilitate them.
13. Amend the MPRDA to:
  - a. make a 1,500 metre exclusion zone around mining operations compulsory.
  - b. make applications for mining licenses in heavily populated areas impossible.
  - c. make the construction of housing, public infrastructure, and roads below tailings illegal.
  - d. Make mandatory the constant management by mining companies of mine waste, even after mine closure, mine dereliction and mine abandonment.
  - e. Require any tailings dam that contains more than 50,000m<sup>3</sup> of water and has a height of a wall of more than 5m to have a dam safety permit.

### **11.3 For the National Prosecuting Authority**

14. Institute criminal proceedings against the mine owners, management and the National Department of Mineral Resources.

For a full list of the demands of the Jagersfontein Multi-stakeholder Mining Forum, see Appendix A.

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## Appendix A: Jagersfontein Multi-stakeholder Mining Forum Memorandum of Demands

**JAGERSFONTEIN MULTI-STAKEHOLDER MINING FORUM (*The JMMF*)** #JapaneDiamonds-OurFuture-OurWealth...!!! CONVENER: Mr Surprise Xhwantini 1346  
Itumeleng Township JAGERSFONTEIN \* 9974 CONTACT DETAILS: +27 (0) 76 365 2640 or +27 (0) 61 365 0741

### MEMORANDUM OF DEMANDS TO THE JAGERSFONTEIN DEVELOPMENTS (PTY) LTD MINE and the ITUMELENG COMMUNITY TRUST (ITC)

Tuesday, 11 October 2022

TO:

- ☐ The Jagersfontein Mine (*JDP Mine*) and Itumeleng Community Trust (*ICT*)
- ☐ The Honourable Minister of Mineral Resources: Mr Gwede Mantashe
- ☐ The Premier of the Free State province: Me Sefora Sisi Ntombela

#### 1. INTRODUCTION

It is exactly one month since the communities of Charlesville and Itumeleng woke up to a tsunami of mud rushing through their streets, sweeping away people, animals, houses, and infrastructure. The disasters of neoliberal capitalist mining always reflect the class nature of this exploitative system. It is the wealthy investors who walk away with the profits and the poor who bear the brunt of the environmental destruction and the disasters. Four weeks have passed, yet the management of this mine has not bothered to engage directly with the communities despite the harm and pain caused by their negligent management of the mine. We remind the owners and the managers that we marched and submitted a memorandum of demands in November 2018, most which were simply ignored. If some of those demands were met perhaps the disaster itself could have been avoided. We will repeat some of those demands here.

**Therefore:**

1.1. We, the residents and community of Jagersfontein, comprising of a population of close to 50 000 people, and led by the Jagersfontein Multi-stakeholder Mining Forum (JMMF), have rallied the whole community and are here as ordinary citizens, and as local organisations and sectors within our society.

1.2. We are here as **women, the disabled, the youth, workers, organised labour** (*trade unions*), **community leaders, community based; faith based** (*churches*); **and non-governmental organisations, business** (*taxis, contractors, farmers, etc.*), **sports, unemployed, organs of people's power** (*ward committee, school governing bodies, community policing forum and clinic committee*), **elected public office-bearers** (*municipal councillors*), **municipal and government officials, professionals, and political parties.**

1.3. We have gathered here today to engage in peaceful protest action to highlight our plight following the recent disaster.

1.4. We have taken hands and marched for the plight of our community and workers already in the employed by the Jagersfontein Development Project (JPD), some of whom are today threatened with disciplinary action or sanctions by the mine owners and management for having spoke to the media and "outsiders" about the disaster and the negligence of the mine operator.

1.5. We are here to represent those who lost loved ones in the disaster, those who were injured, those who lost houses and valuable property as a consequence.

1.6. All these working people and the poor have suffered this tragedy at the hands of JDP's capitalist profits.

1.7. The JDP Mine bosses have always had the power, and the workers are always the targets of their exploitation and victimization, and now their criminal negligence.

## 2. WHY THE PROTEST?

2.1 The nightmare experienced following the breaking of the Jagersfontein tailings despite the warning of the impending disaster from both employees and community members, and the subsequent loss of life, injury, loss and damage to property and infrastructure.

2.2 We hear through the media that the mining company has "donated" R20 million towards the clean up of the mess it caused. We note that donations are tax deductible. We therefore find this act of "charity" reprehensible and demand that the polluter pays principle applies forcing the company to bear the full costs associated with the calamity.

2.2 As we speak the employees of the Jagersfontein Mine are contracted and do not enjoy full worker rights, despite our protest against this situation back in 2018.

2.2. They are NOT entitled to pension fund and medical aid.

2.3. Victimisation and intimidation of union members (*especially its direct employees and those working for the mining security company*) continue unabated at the hands of the **Mine Manager, Mr Johan Pretorius** and his racist security company friends who continue to fire workers willy-nilly. We note with concern their threats against workers and community members who spoke truth to power to the media and "outsiders" following the disaster.

2.4. What remains of the tailings dam looms large over Itumeleng and continues to pose and danger to the community. With the first heavy rains it could also come down.

2.5 There has been no attempt at community or substantive black economic empowerment despite our 2018 demands in this regard, there are still no local black employees in the management of both the mining company and its security associate.

2.6. As a result, workers are verbally abused on a daily basis and are fired at the slightest provocation.

2.7. Black workers at the mine warned their white supervisors of the impending disaster, the supervisors refused to heed the warnings. The root who workers of this is racial nepotism. White mine workers at the mine are treated differently, even though they do not have any professional skills - **they are given supervisory jobs at the expense of black workers who have with the Jagersfontein Mine for a longer period. This lack of competence led directly to the disaster.**

2.8. Furthermore, today's community protest is also as a result of the failure of the Department of Mineral Resources (**DMR**) to ensure that health and safety inspections occur at this mine as required by law and that the mine has a disaster management plan and community engagement and awareness raising of the details of the disaster management planning by the mine.

2.9. Losing a High Court judgement (**Case No: 3215/06**) on Thursday, 13 December 2007, in the matter between De Beers Consolidated Mines LTD (**applicant**), Ataquia Mining (PTY)

LTD and the Department of Minerals and Energy (*repondents*), left the Jagersfontein Community devastated.

2.10. The High Court ordered **that the provisions of the Mineral and Petroleum Resources Development Act, No. 28 of 2002, do not apply to the tailings dumps situated on subdivision 16 of the farm Jagersfontein 14, Magistral District of Fauresmith.**

2.11. The aforementioned judgement will always be a painful pill to swallow as the community continue to feel its negative implications and made it impossible to ensure that the tailings complies with rwgulations and safety standards.

2.12. **ALL OF THE ABOVE HAS TURNED INTO A NIGHTMARE FOR THE PEOPLE AND COMMUNITY OF JAGERSFONTEIN.**

2.13. With this sad situation at hand, the Jagersfontein Mine bosses became a law unto themselves and a direct cause of the negligence that led to the disaster.

### 3. OUR DEMANDS

3.1. As strategic stakeholders in the Jagersfontein Mine, we as members of this community wish to bring the following demands to the attention of the Jagersfontein Mine (WE DEMAND THE FOLLOWING):

a) The Jagersfontein Mine **MUST** meet urgently with community leaders or the Jagersfontein Multi-stakeholder Mining Forum to discuss the extent of the disaster resulting from the criminal negligence of the mine and its impact on the community.

b) The Jagersfontein Mine **MUST** provide a copy of the Environmental Impact Assessment (EIA) and the Environmental Management Plan (EMP) of the mine and the details of the consultants involved in drawing up these documents.

c) The Jagersfontein mine **MUST** provide a copy of its disaster management plan.

d) The Jagersfontein mine Must:

1. Dismiss the compliance officer, as the tailings did not comply with the law, regulations, or global best practice.
2. Take full responsibility for the death and destruction that resulted from the disaster and compensate those affected accordingly.
3. Completely remove the tailings from its current location.
4. Charge the compliance officer and the consultants who drew up the environmental impact assessment, the environmental management plan and the construction and oversight of the tailings with gross negligence and failure to disclose the obvious problems with regard to the location, construction, and management of the tailings.
5. Demand that the consultants used to draw up its EIA and EMP be deregistered as accredited consultants in environmental management and planning.

d) The Jagersfontein Mine **MUST** respond in writing to all the demands made by the community in the memorandum of 2018

e) In the spirit of the MPRDA, the Jagersfontein Mine **MUST** ensure enforcement of the Social and Labour Plan (*SLP*) objective of the Act to promote and advance the social and economic welfare of the people of Jagersfontein - **notwithstanding the De Beers/ Ataquia 2007 court judgment the MPRDA's SLP Guidelines may be considered to effect the spirit of the original sale agreement.**

f) The Jagersfontein Mine **MUST** make public an independent audit of its Annual Financial and Corporate Social Responsibilities (CSR) or SLP Reports since the start of the mining project in 2011.

g) The Jagersfontein Mine **MUST** re-negotiate guidelines or processes with the community for implementing its CSR projects and programmes in the spirit of the MPRDA - **including but not limited to the establishment of a functional future Jagersfontein Multi-stakeholder Mining Forum, as well as re-skilling and Human Resource Development (HRD) strategies.**

h) The Jagersfontein Mine **MUST** provide specific resources to all stakeholders, including organised labour (*trade unions*), to benefit and participate in the verification of technical information regarding the sustainability and profitability claims made by the mining company.

i) The Jagersfontein Mine **MUST** disclose in full all its future intentions for the possible acquisitions of mining rights in and around the area of Jagersfontein.

j) The Jagersfontein Mine **MUST** contribute to the development of a local economic development strategy for the community of Jagersfontein and Kopanong Local Municipality - **this strategy should profile possible economic opportunities for the Jagersfontein community.**

k) The Jagersfontein Mine **MUST** consult with the community in developing a system which will regulate the recruitment of employees (*both locally and outside the Jagersfontein borders and its labour sending areas*).

l) The Jagersfontein Mine **MUST** consult with the community in developing a system which will regulate all its procurement processes to provide services to the mine - **this will demonstrate the mining company's commitment to invest in local businesses and initiatives.**

m) The Jagersfontein Mine **MUST** attend to and consider the complaints of workers in the mine with their organised labour representatives, namely; NUM and AMCU - **we sadly learned that the workers do not enjoy their hard earned benefits such as pension fund and medical aid benefits, their employment status is that of an independent contractor which is similar to the hated system of labour brokering.**

n) Finally, we demand that the operation of the Jagersfontein Mine **MUST BE SUSPENDED OR STOPPED WITH IMMEDIATE EFFECT – until the remaining tailings have been removed and the operation declared safe by the DMRE**

o) **The intimidation, victimisation and direct attack on the members of the community, and the arrogance of the Jagersfontein Mine management as demonstrated through Messrs Sipho Puwani and Johan Pretorius must be stopped to avoid unnecessary future confrontation.**

p) We further demand that the DMRE **MUST**:

- i. Dismiss the officials in the DMRE, the Department of the Environment, and the Department of Water Affairs who approved the environmental impact assessment and environmental management plan for this mining operation.
- ii. Fully capacitate the division of the mining inspectorate and ensure regular inspections of tailings and other hazardous mine waste management activities.
- iii. Apply the polluter pays principle and force the company involved to pay for the damages caused through its negligence.

- iv. Amend the regulatory requirements to include community consultation throughout the life of the mine and community participation in all mine disaster management units, assessments and planning, environmental management impact assessments, planning and compliance oversight and adherence.
- v. Amend the Minerals Petroleum Resource Development Act (MPRDA) to prohibit mining companies from selling non-profitable mines, instead of closing and properly rehabilitating such mines.
- vi. Amend the MPRDA to make a 1 500 exclusion zone around mining operations compulsory.
- vii. Amend the MPRDA to make applications for mining licenses in heavily populated areas impossible.
- viii. Amend the MPRDA to make the construction of housing, public infrastructure, and roads below tailings illegal.

#### **4. FAILURE TO MEET THE DEMANDS**

4.1. Failure to accede to these demands will translate in more community protests and legal battles to force the mine to re-negotiate everything (***both social and labour related issues***).

4.2. **The Jagersfontein Community will** consider all relevant legal and technical mechanisms to force the mine to listen and engage on their demands - **these measures may include mobilisation of the municipality on the provision of water and continuous mass mobilisation and protests to STOP the mine from operating.**

4.3. **The Jagersfontein Community will** pressurise the South African Government or DMR to revoke the licence of the mine - **this notwithstanding the FACT that we will continue to dispute the legality of the JDP mining permit.**

**JAGERSFONTEIN MULTI-STAKEHOLDER MINING FORUM (The JMMP)**  
**#JapaneDiamonds-OurFuture-OurWealth...!!! CONVENER: Mr Surprise Xhwantini**  
 1346 Itumeleng Township **JAGERSFONTEIN \* 9974 CONTACT DETAILS: +27 (0) 76 365 2640 or +27 (0) 61 365 0741**

4.4. **The Jagersfontein Community will** pressurise the Department of Environmental Affairs to investigate whether the mine is compliant with the prescribed water National Environment Management Act (NEMA) - **we believe that the Mine has not been compliant with the law.**

4.5. **The Jagersfontein Community will** pressurise the Kopanong Local Municipality and the Department of Water and Sanitation (DWS) to investigate whether the mine is compliant with the prescribed water legislation and regulations - **we believe that the mine may be obtaining water ILLEGALLY, especially water from boreholes.**

4.6. **The Jagersfontein Community will** also pressurise the Kopanong Local Municipality to immediately suspend all agreements (*if any do exist*) and cooperation with the Jagersfontein Mine - **OUR WELL CONSIDERED VIEW IS THAT JAGERSFONTEIN MINE MUST BE FORCED TO RE-NEGOTIATE EVERYTHING .... THE MINE HAS BECOME A LAW UNTO ITSELF AND HAS TO BE STOPPED WITH IMMEDIATE EFFECT ...!!!**

4.7. **The Jagersfontein Community will** continue to lobby the Premier of the Free State, the Minister of Mineral Resources, and the DMR to enforce all necessary oversight role responsibilities and processes regarding the Jagersfontein Mine - **we sadly learned that DMR has previously been denied access to the mine.**



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