THE SATURDAY PAPER

NEWS
MAY 24, 2014

Mining's multi-billion-dollar black hole

As the boom ends, poor oversight and lax bonds leave governments stuck with an enormous bill for mining's clean-up.

MIKE SECCOMBE

Premier Campbell Newman, right, visits a mine in north Queensland. Andrew Rankin

Back in the good old days, there was no green tape for miners to worry about. Dig it up, ship it out, leave the mess behind.

Consider Mount Morgan, near Rockhampton in Queensland, at one time the largest goldmine in the world.

In the 100 years to 1981 it produced about 262 tonnes of gold, 37 tonnes of silver and 387,000 tonnes of copper, as well as 134 million tonnes of waste rock and overburden.

Then the price of gold fell and the price of the cyanide used to extract the gold rose, and the mine's then-operators walked away, leaving behind the old pit, flooded with billions of litres of acidic water and elevated levels of 18 elements, including lead, cobalt, cadmium, copper, manganese.

And there it has stayed – a cocktail of heavy metals in a giant bath of sulfuric acid – with minimal rehabilitation, gradually leaching pollutants.

Decades later, long stretches of the nearby Dee River remain highly toxic. And in the big wet of January 2013, when the pit overflowed, there were "impacts", as the Queensland mines department blandly put it, for 50 kilometres downstream. That is to say, the Dee River turned bright turquoise, killing fish and other wildlife, and leaving behind a poisonous sludge on the streambed.

> **"Environmental rehabilitation at the expense of those in the mining industry whose activities cause the damage**

The Queensland government has spent more than $50 million since 1992 mitigating the worst of the problems posed by the abandoned site at Mount Morgan. Some of the seepage has been intercepted and pumped back into the pit, the acidity has been lowered by adding lime to the water, giant fans have been used to evaporate pit water, and there have been periodic "controlled releases" from the pit into the river. But, as the departmental website makes clear, there is no "practical" (read: affordable) solution to the Mount Morgan environmental problem, such as emptying the pit of its toxic contents and filling it with the overburden.

Estimates of the cost of such a complete fix range into the hundreds of millions of dollars. It's simply not going to happen. What we have at Mount Morgan is an ongoing ecological disaster, extending indefinitely into the future.

This is what happens when you have inadequate monitoring and regulation of mining activity, or "green tape", to use the pejorative term of some of our politicians – notably Prime Minister Tony Abbott continues to remain an unrealised aspiration." – Qld Auditor-General's report

term of some of our politicians – notably Prime Minister Tony Abbott and Queensland Premier Campbell Newman.

Indeed, within a month of Abbott winning office last year, he and Newman staged a media stunt in Brisbane to sign a memorandum of understanding, devolving sole power to the state to make environmental approvals and promising this "cut to green tape" would make things quicker and easier for miners.

It could happen again

Of course, the Mount Morgan debacle dates back decades, to the days of the corrupt conservative government of Joh Bjelke-Petersen. It couldn't happen now, could it? Miners can't still abrogate their responsibility to rehabilitate mined land?

Well, actually they can, and they do. Often. Maybe not to the same degree as at Mount Morgan, but regularly and in all Australia's states and territories. The costs of dealing with the messes left by mining companies fall on others – governments, landholders, private citizens – all the time.

A report released last month by the Queensland Auditor-General's Department estimated a potential state liability of up to $1 billion for the clean-up of the 15,000 abandoned mines in that state alone.

And that was a very lowball estimate, according to others.

"We think that $1 billion figure is a gross underestimate. It's likely 10 or 20 times that," says Tim Buckley, of the Institute for Energy Economics and Financial Analysis. Buckley, a former long-time corporate analyst, is now working his way through the balance sheets of mining companies in the energy sector, assessing their likely liabilities for mine rehabilitation against the provisions made for those clean-ups. In many cases, they come up way short.

Perhaps the most obvious recent example of this was provided by GDF SUEZ's Hazelwood coalmine in Victoria, which caught fire in February, and for weeks choked the 14,000 residents in nearby Morwell with acrid smoke.

There is still an inquiry going on into the Hazelwood fire, but the basic cause seems clear enough already: the company did not meet its obligations to rehabilitate previously mined areas. And the Victorian government – arguably the most lax in the country in regulation of the industry – did not adequately monitor or enforce those obligations.

As Environment Victoria pointed out in its submission to the Hazelwood inquiry this week, a freedom-of-information request showed that since 2009, the state government had not "engaged in any substantive correspondence with mine management, nor has the regulator conducted any assessment of progressive rehabilitation at the site".

It continued: "The fact that the fire took hold in areas of the mine that had allegedly been rehabilitated suggests that any rehabilitation work that had been undertaken was not performed adequately.

"The $15 million rehabilitation bond, used in the same way a tenant pays a security deposit on a rental property, has been known since 1993 to be far too low to create any incentive for progressive rehabilitation," it said.

"Financial assurance calculations used in Queensland mines suggest a bond of as much as $483 million would be more appropriate for Hazelwood. The severe underestimate of rehabilitation costs and the level of the bond potentially creates a massive financial liability for Victorian taxpayers …"

As the author of that submission, Dr Nicholas Aberle, told *The Saturday Paper*: "GDF SUEZ doesn't have much of an Australian operation. Why would they even start spending hundreds of millions of dollars on rehab, if at the end of the mine's life they're can just pull up stumps and say, 'Hey, government, you've got our $15 million rehab bond, you guys can do whatever you want with that. We're off.'

"That way, GDF SUEZ saves hundreds of millions of dollars. But taxpayers then have to foot the bill."

Unsurprisingly, the industry lobby asserts that contemporary agreements between miners and government make more than adequate provision for mine-site rehabilitation.

Melanie Stutsel, director of health, safety, environment and community policy at the Minerals Council of Australia, says things have improved dramatically in the past 10 or 15 years.

These days, she says, "at the point of actually getting mining approval we also have to lodge with our mine-approval plan a closure plan. And that closure plan essentially sets out what we expect the post-mining land use to look like, what we're going to do with the existing development to make the site safe, and how we're going to decommission and dismantle plant and close underground works, for example, what we're going to do in terms of rehabilitating the disturbed areas …

"And alongside of that sits a financial surety process."

This, says Stutsel, "is a cash security, a bond or a book value [that] actually needs to reflect the full residual cost, and there's a risk rating that's put on that in most jurisdictions."

Depending on the number of variables, such as the mine operator's past record, the rate of "progressive rehabilitation" and environmental performance over the life of the mine, she says, "sometimes you'll be revising up the cost estimate and sometimes you'll be revising back the cost estimate, and that'll look dynamic over the life of the mine.

"At some points in time the financial provision could be anywhere up to one-and-a-half times the actual projected cost of closure."

Stutsel's testament to the adequacy of current regulatory regimes paints a picture of capable and assertive regulators, close engagement between companies and those regulators, progressive and comprehensive rehabilitation of mine sites, of social and environmental responsibility by companies, of detailed performance indicators and of adequate provision for contingencies.

But it is widely and independently contradicted.

The Queensland auditor-general's report, for example, concludes:

"Environmental rehabilitation at the expense of those in the mining industry whose activities cause the damage continues to remain an unrealised aspiration."

The recent growth in the sector, dubious practices by miners and incompetence of regulators brought "increased risk of environmental harm and the possibility of adding to an estimated 15,000 abandoned mines", the report found.

As to the capability of the regulators, the audit report found a woeful lack of competence in relation to the "supervision, monitoring and enforcement activities and to its administration of fee debt and financial assurances.

"Data are unreliable; hard to access; difficult to analyse; and often incapable of providing timely and quality information to inform decisions," the report said.

Because responsibility had historically been split between various agencies, and was still divided between the departments of Environment and Heritage Protection (EHP), which looks after current projects, and Natural Resources and Mines (NRM), which looks after abandoned projects, there was "no clear record of financial assurance held by the state".

Those assurances had historically been grossly inadequate to cover estimated rehabilitation costs and, while they had improved over recent years, they still varied widely and remained inadequate in many cases.

Furthermore, "Where financial assurance held [by the mining and environment departments] is insufficient to cover the costs of rehabilitation, the departments are reluctant to take appropriate action to revoke permits and claim financial assurance.

"This risks future environmental damage, which could result in rehabilitation and management costs to the state," said the report.

The audit found only two cases where financial assurances had been forfeited.

"Both occasions were the result of the holders going into administration and, in both cases, the financial assurance obtained by EHP was insufficient to rehabilitate the sites. In one case, the financial assurance held was 1.5 per cent of the estimated rehabilitation cost and, in the other case, the financial assurance held was approximately 10 per cent of the estimated rehabilitation cost."

Far more common, though, than mining companies going bust and thus failing to meet their environmental responsibilities is the situation where companies simply cease active mining, but never formally close the mines, thus putting off their rehabilitation liabilities into the never-never. This is called going into care and maintenance.

Said the audit report: "There are a number of reasons why a mine might go into care and maintenance, such as changes in world commodity prices. It can also be used as a means of avoiding rehabilitation. There is no clear definition of care and maintenance sites and there are [sic] a lack of protocols between EHP and NRM about the management of these sites. This results in sites remaining in care and maintenance while the departments dispute over the administrative and regulatory responsibility for the site."

The audit identified more than 100 mines placed in care and maintenance – including several of which the mines and environment departments were unaware. It sampled the records of 11 of these and found 10 of them had a history of environmental breaches and seven had not provided sufficient financial assurance to cover rehabilitation costs.

"One of the sampled sites had been in care and maintenance since 1998. For this site, the financial assurance held is $3.8 million while the rehabilitation costs are estimated as $14.2 million," said the report.

It called for the environment department to start showing some teeth, upping its enforcement and seeking the full cost of investigating and prosecuting non-compliant companies.

Stutsel of the Minerals Council lauded the new practice of miners working to progressively rehabilitate sites during the life of the mine, rather than leaving it to the end.

But the Queensland auditor's report found "little evidence" of this.

"EHP identified one case since 2006 where progressive rehabilitation had started," it said.

The Queensland audit report, while possibly the most comprehensive in its scope, is but one of many investigations that have pointed to the same problem.

In its annual report in 2012, the NSW Audit Office reiterated its concern that "derelict mines may represent the largest category of contamination liability for the state".

"The 500-plus derelict mines are not regulated under the Contaminated Land Management Program by the EPA.

"The Derelict Mines Program has many thousands of hectares of degraded and contaminated land where mining companies abandoned mines without cleaning up or stabilising the sites," it said.

Likewise the Victorian auditor-general recently complained that no one entity was responsible for oversight in that state.

"Framework weaknesses have been known for at least 10 years, yet action to systematically address them began only within the last year. While these reviews are a positive initiative, they are being planned in an ad hoc manner and occurring in isolation from one another."

Corinne Unger, of the Centre for Mined Land Rehabilitation at Queensland University and one of the country's leading experts on abandoned or "orphan" mines in particular and rehabilitation practices in general, says the picture is broadly the same across the country.

She reckons there are about 52,500 abandoned sites nationwide, hundreds more under care and maintenance, and more still operating under inadequate financial assurance of ultimate clean-up.

But it's hard to be precise, because every state has a different management regime. Western Australia is probably the best, with a good inventory of sites, comprehensive closure guidelines, regular reviews and, as of last year, a 1 per cent levy on the financial assurances of current mines, to be put towards the cost of cleaning up old mines.

Queensland and the Northern Territory are implementing similar models of levying current mines to pay for old ones.

Some governments, such as Campbell Newman's in Queensland, require closure plans as part of the mine-approval process. "But," says Unger, "there is no process for tracking those commitments through the life of the project."

Victoria is the worst state, she says.

"If you look for abandoned mines you won't find them. It's not even something you can talk to someone about. It's no one's responsibility," she says.

Few success stories

The Australian states are resistant to the idea of co-ordinating their regimes, and the Commonwealth has shown no interest in leading reform.

Worse, the anti-green-tape forces are threatening to undo some progress that has been made.

"In Queensland, there has been pressure to reduce the financial assurance requirements because industry says it is tying up money and making it hard to borrow," says Unger.

"And as part of its process of green-tape reduction, Queensland has taken out the requirement for a life-of-mine rehabilitation plan. Everything's being pulled back to a short-term focus."

Overall, the regimes in Australia fall well short of those overseas, in Europe and particularly Canada, she says.

"When I look at Australia, I don't see too many success stories."

Asked to nominate examples of mines that have been fully and successfully rehabilitated, she thinks a while, and comes up with one.

"There's only one small place in central Queensland that's ever been signed off as fully rehabilitated. It's about 500 hectares, over a former underground coalmine. It's now grazing land. It's at the easy end of rehabilitation."

Of course the complexities and costs of rehabilitation vary according to the type of mine and mineral extracted, as Tim Buckley stresses. In the case of an underground coalmine, it may be as simple as capping it to stop people falling down the hole – assuming there are not other environmental problems such as impacts on water quality.

In the case of an open-cut coalmine, it might involve the replacement of tens of millions of tonnes of overburden, a far more expensive proposition. And other types of extraction are far more complex still.

Recently, Buckley has been analysing the financial picture for ERA's Ranger Uranium mine in the Northern Territory.

"You may have noticed recently that the CEO of Rio Tinto, which owns 60 per cent of ERA, made news by saying Rio would not stand by ERA if it was not able to fund its rehabilitation costs," says Buckley.

"ERA has been operating Ranger for 30 years and has a huge remediation cost. I've looked at the balance sheet of ERA and they've not got that much cash there."

The company, he says, has been "quite responsible in its approach to rehabilitation".

"They invested quite heavily. But the price of uranium tanked after Fukushima. And they had a leach pond spill last December and immediately lost their licence to process – yet another unforeseen problem that has seen ERA's assets go down and liabilities go up, making it harder to meet their $603 million rehabilitation liability."

"The market values ERA at $700 million equity market capitalisation, but I estimate the company's value as being negative, because they have something like $357 million net cash … against a $600 million remediation cost, on their own estimates," he says.

The financial assurance posted by ERA is $64 million, just more than a tenth of that remediation cost.

So what's the company to do?

"Well," says Buckley, "they're currently pitching for a new underground mine at Ranger. It's almost a threat: If you don't approve the development of a new mine, we might not have the money left in the listed entity to meet the remediation costs."

Professor Samantha Hepburn of Deakin University's school of law, another person who has put in a submission to the inquiry into the Hazelwood fire, sums up the regulatory regime in Victoria thus:

"A lot of the rehabilitation obligations are self-imposed, self-monitored, there's no clear indication of whether they've been breached, there's no disclosure requirements [and] … the costs associated with remediation may be more than the bond so it's a disincentive really to comply. The system is not working at all, and of course that flows down to all sorts of safety concerns."

And while things are a bit better in other states, it remains the case that miners are not sufficiently "incentivised" to do the right thing. What is needed, she says, is not just bigger rehabilitation bonds, but proper compliance monitoring by external experts to make sure standards are being set at the start of a project and complied with throughout the project's life, with significant penalties for breaches.

And these things are needed soon if the nation is not to face a vastly bigger bill for mine clean-ups. For Australia's long mining boom is ending.

David Brereton, the deputy director for research integration at the Sustainable Minerals Institute at the University of Queensland and a colleague of Corinne Unger, underlines the urgency of it.

"I think there will be a very large number of mines closing in Australia over the next 20 or 30 years – I don't think there's any argument about that – just because they will run out of resources.

"Collectively, I think, probably industry and government have significantly underestimated what's going to be required to really do proper closure on all of those mines."

Clearly now is the time to get the systems in place to stop mining companies from "externalising" their costs by pushing them onto the rest of us; privatising the profits and socialising the losses.

Like all those other three-word slogans, "Cutting green tape" is simplistically appealing. Until you realise the slogan's cost could be measured in more Mount Morgans, more environmental destruction and threats to health and billions upon billions of dollars.

TAGS: Mining coal mining Campbell Newman Tim Buckley GDF SUEZ

This article was first published in the print edition of The Saturday Paper on May 24, 2014 as "Mining's billion-dollar black hole". *Subscribe here*

MIKE SECCOMBE

is *The Saturday Paper's* Sydney correspondent.