

SUBMISSION CONCERNING BHP/BILLITON'S APPIN COLLIERY LONGWALLS 301A TO 302: OBJECTIONS TO THE SUBSIDENCE MANAGEMENT PLAN APPLICATION.

GREAT is a member of RIVERS SOS, a recently formed coalition of community groups who have come together over a growing concern about the intensification of the damage being done to rivers by uncontrolled mining practices in the Southern and Northern coalfields.

The coalition is not against mining; we call for it to be undertaken *at least* a kilometre away from rivers.

RIVERS SOS has submitted a fully documented description of the severe environmental damage being done by longwalls which are too close or under rivers in New South Wales.

The following submission outlines some of the reasons for objecting to BHP/Billiton's Subsidence Management Plan for the Appin 3 longwalls 301A to 302 of September 2005.

Although this SMP plan application is over 1000 pages, the following deals explicitly with the *Summary and assessment of Environmental Impacts, pp 16–33.*

The summary assesses the 'likely' overall environmental impact of extracting Appin area 3. It purports to determine the effects of these new longwalls, using as a basis for this assessment advice from Minter Ellison, lawyers regarding the legislative framework, the judicial considerations and a 'discussion on the guidelines prepared by the Department of Planning, 1995'. It also references the DIPNR document *Is an EIS Required* and the factors in clause 228 of the *Environmental Planning and Assessment Regulation, 2000.*

We note that SMP applications by mining corporations do not at present have to comply with part 3A of the 2005 Environmental Planning and Assessment Amendment (infrastructure and other planning reform) Act since there is a five year transitional period allowed for existing coal mines. BHP/Billiton's SMP application therefore is still required to comply with Part 5 of the EPA 2000 regulation.

It is a moot point, however, as to whether the Act of 2005 will be any more successful in controlling the damaging practices of mining corporations than the EPA Assessment regulation of 2000. BHP/Billiton has flouted every regulation in Sect. 228 since 2000 and has knowingly caused serious damage to the Lower Cataract and the Upper Georges River and their tributaries without any adequate remediation technology in place. The 'grout curtains' which were supposedly able to remediate the serious cracking of river bedrock which occurred as a consequence of longwall mining were always, nevertheless, known to be experimental and have only partially successful; in essence totally inadequate. The lower Cataract River has been degraded to the extent that its water flow, water quality and aquatic ecosystems have been seriously compromised.^{1[1]}

In meetings with the community from 1997 and throughout 2002-2003, BHP/Billiton operatives continually stated that although they knew longwall mines were unstable,

^{1[1]} See Rivers SOS submission to the Dept. Primary Industries. Presented 15.11.05

that river sandstone plates would be cracked (these would probably run for 300-400 metres), there would be water loss, impairment of aquatic ecosystems and lower water quality, longwall mining would go ahead, obviously with the approval of government agencies.

In all instances the Corporation was therefore aware, prior to any of its underground mining activities, that that there would be serious environmental impacts from longwalls which would then, post festum, require 'rehabilitation'. 'Rehabilitation' was equivalent to shutting the door after *allowing* the horse to bolt.

Although this submission deals with BHP/Billiton's proposal for extracting Appin Area 3, the objections listed below have been put before every bad mining development; they seem to be merely part of a process which gives people the illusion that they can have some restraining effect on the continuing pattern of bad mining practices in the Illawarra: specifically here the Cataract, and the Georges Rivers.

As is the usual pattern, in the summary of its SMP application, BHP/Billiton appears to paves hell with good intentions, even when its track record, both in Australia and globally is not impressive. The disaster of the Ok Tedi and the Fly Rivers in New Guinea are examples of uncontrolled political and environmental behaviour by a mining company. **Given this, and the seeming inability of government departments to control practices which are obviously, in the long run, unsustainable, the current SMP Plan for the upper Cataract augers a bad future for the health of the upper Cataract.**

Post –Cataract Mining Patterns

What happened to Marhynes Waterhole near Appin when it was undermined by Illawarra Coal's longwall 5A4 is a prime example of the way environmental issues are dealt with when they come up against economic forces.

It is well known that although there was a great deal of opposition to BHP/B undermining this waterhole this opposition was, as usual, disregarded although, also as usual, the corporation held meetings with community groups to explain how Marhynes Hole and the Georges River would be protected. The intended longwalls went ahead and subsequently the rock bar on the upper reaches of the Georges River was cracked; there was a rock fall of what BHP/B considered 'unstable sandstone material', and a serious reduction of water levels which BHP/Billiton knew were due to subsidence –related cracking. And as in all the cases where its longwalls caused damage, BHP/B equivocated about it and then applied the familiar positive gloss—'drought' was responsible for much of the water loss, and rainfall, it was opined, would restore water levels.

Although there was a great deal of community outrage about what had happened, BHP/B announced that 'government agencies' had approved its 'rehabilitation' plans. It declared that 'an innovative compression-relieving slot had minimised damage', and at a time of serious water shortage, (and in this case water loss compounded by the fracturing of the river bedrock), 'as an interim measure', increased the release of water from Appin Mine to 2 ML/d in an attempt to restore some flow to the river. Neither the increase in water, nor an attempt to grout the cracks were successful; there was an ongoing water loss 'in the order of 3.0 to 5.3 ML/d'.^{2[2]} To compound

^{2[2]} DLWC sourced, December, 1, 2000

the seriousness of the situation, if not its irrationality, given the diminished level of water in NSW dams, for technical reasons ‘mine water’ is drawn from the mains. BHP/Billiton’s argument is that the loss of water down mining induced fractures emerges further downstream. This is a specious argument and an example of the poor quality of its monitoring practices. Marshall argues such a statement should only be made ‘when substantiated by full and proper investigations’. ^{3[3]} These are not evident in BHP/Billiton’s SMP and there is no adequate data to support its claim that:

*‘Experience from mining directly beneath or near rivers suggest that there will be no net loss of water from the river system, (here the upper Cataract) and any surface flow diversion is likely to re-emerge well before it reaches Broughtons Pass’...the impacts associated with minor ponding and desiccation are **not expected to be significant**, particularly in light of the substantial changes in water levels resulting from variable releases from the Cataract Dam’.* ^{4[4]}

Both explanations have been shown to be a patently inadequate.^{5[5]} Although they may have some legitimacy in relation to the loss of water over the whole mining area this loss is relative to scale against the loss of water in a localised area. The effect of the local loss is that it creates barriers against the movement of aquatic fauna, wetted habitats dry out and therefore cannot function normally. Further, water quality is lowered; it becomes salinated and low in dissolved oxygen. The movement of water through the fractured sandstone plates also concentrates manganese and iron levels.

Not only is the data presented in the application for two new longwalls on the upper Cataract insufficiently supported, it can also be seen as also obscurantist since the projected tests put forward for monitoring their effects are inadequate as they stand. This becomes evident once the connection of mining practices to the Sydney water supply is made. When the government is forced to release water from the upper Nepean in order to attempt to improve river health, the projected increase in longwalls would be highly likely to reduce the effectiveness of these releases. As a consequence there would be an increased pressure on the government to use more water from the Sydney mains in order to achieve the desired environmental outcome.

It is no wonder that despite the drought (and this in itself is considered by some professionals to be related to the complex set of circumstances connected to global warming), Sydney is experiencing severe water shortages. The interconnection of water shortage and mining activities in both the Southern and Northern coalfields is in need of sustained analyses by the government agencies involved in order to require the mining industry to find less damaging solutions to environmental problems.

Consultation Practices.

BHP/Billiton states that it consults with the appropriate departments and therefore conforms to the requirements for underground mining. It states that it was with the approval of the Department of Mineral Resources it had been able to ‘complete some surface repairs’ to the Upper Georges River and Marhynes hole.

^{3[3]} ibid., Rivers SOS p.16 attachment C

^{4[4]} BHP/B Summary of the Appin Colliery Longwalls 301A- 302 SMP Application, p.16 2005

^{5[5]} See in particular the DIPNR website which concerns the metropolitan water strategy *Water and Sydney’s Future* 2004

Both of these are still in bad shape, probably irreparably damaged, as is the Lower Cataract; it will take something more than ‘some surface repairs’ to even begin to repair the damage, that is if repairs are even possible. Mining induced subsidence has even badly affected areas which are of high conservation value, including the Dharawal State recreation Area.

BHP/Billiton continually references its extensive consultation with the ‘community’, although very little of what is happening is known to the general public, and appear in consequence as purely regional problems. In order to quieten community disquiet a great deal of money is spent on public relations: glossy brochures, gifts to participants in (closed) community forums and ex gratia payments (‘Community Partnership Programs’) to various groups who have been affected by subsidence.

Longwall mines have badly affected houses in Appin and ten properties have already had to be demolished. Enclosed is a document on the effects of longwall mining on communities in Pennsylvania which seem to be identical with the problems experienced by people in Appin and the southern and northern coalfields:^{6[6]} In a paper analysing the problems created by longwalls in Pennsylvania, Kunz shows that:

Many of the costs related to longwall mining are being borne not by the mining industry, but by the residents of the coalfields, by the taxpayers, and the citizens of the Commonwealth whose environment is being sacrificed without the proper attention of the Pennsylvania Department of Environmental Protection. Longwall coal mining causes natural resource destruction that is not adequately recognised, analysed, minimized, or compensated—despite an existing regulatory process that is supposed to protect the environment’

Apart from the damage to human communities, natural habitats have been altered to such an extent that species and ecological communities dependent on aquatic and semi-aquatic habitats have also been badly affected, probably permanently.

The Rivers SOS submission details an important and essentially ignored study by the NSW Scientific Committee which has indicated the effects of the *Alteration of habitat following subsidence due to longwall mining as a key threatening process*.^{7[7]}

It is difficult to see how any of the above complies with Section 228 of the E.P.A. regulation of 2000.

Mining Culture

There is a long-standing mining culture that has always allowed the mining industry to assume a dominant position in any issue, and to maintain this position in any issue which may threaten its autonomy.

Mining in Australia is now mostly in the hands of large global corporations with vast financial resources which can afford expensive legal and consultative expertise in order to obtain desired outcomes. The current summary of the SMP application is able to gloss over problems which are never analysed as ‘significant’. This occurs even when the corporation **knows that the projected longwalls 301A to 302 will fracture the riverbed of the upper Cataract**.

^{6[6]} S. Kunz *Effects of Longwall Mining*, Sierra Club, p.1 my emphasis.

^{7[7]} NSW Scientific Committee, *Alteration of habitat following subsidence due to Longwall Mining as a key threatening process Fact sheet*, p.1 August 2005

A serious problem with the current SMP application it that seems to presume that the health of the upper Cataract can be safely left in BHP/Billiton's hands, thus controlling both monitoring and mitigating processes.

It has been obvious to many concerned professionals, however, that both are of poor quality. This is evident in the way the cracking of the Lower Cataract and the Georges River was 'monitored'; the mitigation measures which followed were ineffectual and the attempt to solve problems by increasing the water flow after it had been diminished by the fracturing of river sandstone plates is irrational. To use 2ML/d of water from the mains, as was done to keep the Upper George's river flowing during the drought in 2003 was bad enough; it had no effect on the resulting contamination.

What is appalling about this repeated pattern of serious environmental degradation of major rivers and waterways is not only that BHP/Billiton has prior knowledge of what will ensue as a consequence of longwalls being driven too close to, or undermining rivers, nor that its current SMP proposal outlines its intention to operate in the same way as before on the upper Cataract River with Longwalls 301A and 302. It is the factors which drive the contradiction between what can only be seen as legislative ideals and what actually occurs which needs a sustained analysis in order to be able to direct better mining practices. This cannot be undertaken here.

In the last ten years at least there have been a vast amount of negative reports about the dangers of longwall mining from government agencies and environmental scientists.

Community petitions and meetings with the DMR and DPI, public forums outlining the degradation of rivers and waterways in the southern and northern coalfields have been many; it is important to note that they are now growing in strength. Independent mining engineers and hydrologists, however, have argued the danger of mining any closer than a kilometre away from rivers for some time.^{8[8]}

Regardless of these submissions which call for safety zones around rivers, BHP/Billiton has been continually allowed not only to degrade them, but now intends to mine 80 metres away from the upper Cataract, and probably just as close to the Georges River in the near future. Given the extent of the knowledge about subsidence damage, and the probability of continuing impacts on the strata and hydrology of rivers, it is incredible nothing has been done to make sure that longwalls are kept *at least* a kilometre away from rivers.

The E.P.A. regulation of 2000, sect. 228, the amendment to the Mining Act of 1992, the Department of Planning guidelines of 1995, and the *Protection of the Environment Operations Act 1997*, for instance, are all concerned to describe the regulations and enforcement provisions for controlling breaches of the legislation dealing with the environment. These 'controls' appear to be almost completely ineffectual.

^{8[8]} See for instance, L. Holla and E. Barclay *Mine Subsidence in the Southern Coalfields, NSW, Australia*. NSW Department of Mineral resources, 2000, B.K. Hebblewhite, *Horizontal Movements Associated with Longwall Mining*, University of NSW, 2000

Regardless of these legislative guidelines, and solid scientific knowledge against current practices, there has been no real change in the demands and activities of mining corporations, nor the fact that the DPI continues to give approval for them. This begs questions about the criteria used to determine how decisions are made and SMP's approved. It seems obvious that the extant regulations and guidelines which are supposedly there to also protect sensitive areas must be ambiguous, and so hold the possibility of interpretations which can support bad mining practices in both the southern and northern coalfields.^{9[9]}

Given this, it is difficult to avoid analysing the inadequate way mining is controlled as either a regulatory failure, or worse, as a tokenistic response to the activities of an industry which has a profound relation to economic forces: government treasuries, shareholders, and the financial gains made possible by the increasing demand from China and India for coking coal.

The relation between this industry and the economy is evident in the recent figures obtained from the NSW Treasury Department.

Annual returns from mine royalties:

- 2003–2004 = \$233.million
2004–2005 revised = \$360 million
2005–2006 (revised in Budget Papers no. 2) – \$413 million predicted.

These figures are obviously good news for the NSW government which is experiencing a fiscal shortfall, a federal government which is trading on the exploitation of Australia's mineral resources, and shareholders who demand high returns from investment in the mining industry.

Analytical Problems.

- Of course it is not a sufficient analysis to argue conspiracy theories or blame individuals or groups for a complex economic process in which we are all involved. But the fact is we may not have much more time before we will be forced to take into account the outcome of our rapacious approach to the environment and act with more intelligence than at present. We need a different form of analysis in order to have a better grasp of how to manage societal needs so that they do not create problems which cannot be resolved.

^{9[9]} Although it is on the whole pro longwall mining, ACARP is another body which has documented the bad impacts of mine subsidence after longwall mining. See its *Impacts of Mine Subsidence on the Strata and Hydrology of River Valleys* Australian Coal Research Ltd. June 2002

Questions which need to be answered:

- 1.What guarantees are there that water will still be pumped into damaged rivers in the future if they cannot be repaired and the situation worsens. The cost of pumping water is very high, and no doubt this would be of some concern to mining management. The long term legacy of current mining practices is therefore a serious concern.
2. What happens to rivers if there is a change in energy resources and mining corporations leave without legislation in place which forces them to be responsible for the environmental damage done.
3. How much of the destructive environmental impacts presently allowed can be sustained in this country without the danger of an ecological collapse. Global warming is not a fantasy.

The requirement, once again, for the presentation of submissions and objections about dangerous mining practices will hopefully result in being more than a game played to give the illusion that something can be achieved by submitting them. It is hoped that the problems outlined here and elsewhere will have be serious consideration by the DPI before it grants approval for longwalls 301A and 302. It must become convinced of the need to allow a safety zone of at least one kilometre from rivers. There is enough important scientific evidence for this to be recognised as essential even if it means weighing up short term economic gain against long term survival. It will mean that the DPI will be required to bite the bullet and demand that BHP/Billiton change their plans for Appin 3 longwalls 301A-302.