

NEWS RELEASE

27 January 2008

This is in two sections: first, the bare facts and comments; and second, more detail on environmental effects for those with time to read on.

1) BHP Billiton: Cracking Sydney's Iconic River

Hundreds of methane gas vents have erupted in a formerly pristine 500m stretch of the Nepean River, half way between Douglas Park and Menangle villages, in a rural area south west of Sydney.

Sections of the river here are simmering and boiling with methane. Methane itself is odourless, but it typically also carries elements of carbon dioxide, hydrogen sulphide and nitrogen.

Local residents Betty and Ross Addison-Baker and Rivers SOS's Caroline Graham went downstream by boat last Thursday and took the attached photographs.

BHP Billiton, in a press release of 18.1.08, have admitted that the first of their four underground longwall coal mines at this site has caused "minor releases of gas at the surface of the Nepean River". Our photos demonstrate that the release is major.

New methane gas vents on this scale show that the river bed has been extensively cracked and fractured as a result of the current mining operation carried out by BHP Billiton, which is extracting coal here at an offset distance of a mere 180m from the river.

To avoid such damage, Rivers SOS calls for a safety zone of 1 kilometre between mining operations and river systems. Thirty- seven community and environmental groups support this campaign. BHP Billiton indicated in their Environmental Impact Statement that, in their

● Rivers SOS is a coalition of environment/community groups; formed as a result of the wrecking of rivers in NSW by mining operations. We campaign for a safety zone of at least 1k round all rivers to protect them from ongoing damage. Groups supporting this campaign are: ● The Wilderness Society ● Nature Conservation Council of NSW ● Total Environment Centre ● Colong Foundation for Wilderness ● Blue Mountains Conservation Society ● Mineral Policy Institute ● Minewatch NSW ● Sutherland Shire Environment Centre ● Macarthur & Illawarra National Parks Association ● Gloucester Environment Group ● Nepean Action Group ● Georges River Environmental Action Team ● Hunter Environment Lobby ● Greens NSW ● Waterkeepers Australia ● Central West Environment Council ● OnlyOne Planet Australia ● Mudgee District Environment Group ● Mountain Dragon Bushwalkers ● Lithgow Environment Group ● Pages River and Tributaries Water Users' Association ● Clarence Residents' Association ● Johnsons Creek Conservation Committee ● Save Barrington Tops Committee ● NSW Canoeists Inc. ● River Canoe Club ● Caroon Coal Action Group ● Australian Coal Alliance ● Upper Hunter Waterkeepers Alliance ● Wollondilly Bass Club ● Robertson Environment Protection Society ● Save Water Alliance ● Inland Rivers Network ● Australian Democrats ● Water First ● Ironside Community Action Group

opinion, an offset distance of 500m would be safe for the Nepean, but that even this was “not economically feasible.” (This from a company that made \$14 billion in profits last financial year).

In 2005 the company did alter plans to mine directly under the Nepean River, after community protests and in view of irreparable mine damage done to two other rivers in the area. Unfortunately what could have been a generous gesture to protect the river turned out to be the usual greed- motivated fiddle .The much-trumpeted revised plan still puts mining far too close to the river on either side. It still puts this stretch of the river within the significant 35 degree angle of draw – a notional damage zone drawn around mine plans, based on a 35 degree angle going out from the bottom of the mine workings to the surface. This traditional rule-of-thumb predictor puts this stretch of the Nepean River well within the damage zone, even though it is true that mining will not be directly underneath. In our opinion there is little difference.

Cumulative damage will very soon increase the severity of the subsidence impact when extraction commences on the opposite side of the river – this is only the beginning. Worse, a further series of longwalls is being planned going north from this site, all far too close to the river. These plans have not yet been submitted to the NSW Government, but must be opposed in their present form.

Mining operations have damaged several river systems around NSW. But the Hawkesbury-Nepean River is surely extra special: it is Sydney’s iconic river; its waters help to generate 70% of Sydney’s goods and services, according to the 2004 report by the Hawkesbury-Nepean River Management Forum, and numerous tourism and recreational activities rely on it.

But it is also important for non-monetary reasons. For example, this river is a lovely presence in Kate Grenville’s prize-winning novel “A Secret River” (2005) and in recent work by Sydney-based artist Joshua Yeldham, just to name two of the thousands who have been inspired by its beauty.

A NSW Government report on “Securing Sydney’s Water Future” (DIPNR, DEC et al, 2004) states the obvious: that this river is now showing signs of “substantial environmental stress.” But don’t worry: “ ... the Government is committed to protecting and restoring ... Sydney’s river systems.”

Former Premier Bob Carr, in launching the above report and plan, claimed that this was “the next step in a program to restore the health of the Hawkesbury-Nepean and the other precious rivers surrounding our city.”

In similar vein, Premier Morris Iemma addressed environmental groups in May 2006, assuring them that “nowhere is our commitment more determined than in our plans to restore the State’s iconic inland rivers and wetlands.”

Caroline Graham of Rivers SOS points out that “the huge gap between pious pronouncements and the reality of the NSW Government’s collusion with mining companies to wreck our rivers year by year is breathtaking. The NSW Government is as hooked on mining royalties as any desperate junkie, so people in NSW who care about the destruction of our beautiful rivers must

stand up and protest. If we don't the process will continue stealthily, with both politicians and public servants seemingly unable and unwilling to halt the damage."

2) More detail on environmental effects

The major problem with methane release is its high flammability. It can accumulate in hollows and caves, as in the Nepean gorge, and potentially reach explosive concentrations (following a study released this January by the Colorado Department of Natural Resources).

Residents using river water near drill sites in Colorado were warned not to shower in unventilated rooms when methane was released from coal seams. In the mid-90s, Amoco bought out several families living near methane seeps in Bayfield, Colorado because of high methane levels in their basements and their drinking water. The houses were then demolished.

Methane gas continues to percolate in several creeks north of town. In 2005, a trailer ignited and exploded when a resident lit his stove – methane was leaking from a nearby well. He was in a burns unit for six months.

So, landowners along this section of the Nepean River need some urgent advice – as yet their concerns have been ignored. Those who rely on pumping river water for domestic use might find their tap water fizzing with methane, and discoloured, as with residents in La Plata County, USA, who were forced to turn to bottled water. Officials told them that methane is harmless, but dozens complained of "foul tasting" water.

In Michigan in 1997 the Department of Environmental Quality issued 1200 free methane detectors to residents in an area of concern, and residents were advised to inspect basements and foundations for cracks and openings through which methane might seep.

A consulting geologist for La Plata County says that the methane gas seeps will continue "for at least 300 years" (Rocky Mountain News, 10.12.07). Residents on the Cataract River were advised that methane would cease venting after six months, but after ten years, though gas venting is much slower and less obvious now, we can still see substantial bubbling in certain places in the river.

In the USA, some gas wells have produced a continuous supply for 20 years. In the Powder River Basin, it is predicted that gas wells will typically provide methane for 10 – 12 years.

A related problem is that vegetation and wild life can be asphyxiated in surface areas where methane is venting. Methane seeps often have companion "dead zones" where methane-saturated soils starve root systems. The seeps can asphyxiate burrowing animals like wombats, and kill trees and bush in the riparian zone. Patches of trees and bush died in the Cataract gorge in this manner.

As we said, methane in the Nepean is evidence of large scale cracking of the sandstone river bed near the mine operations. The multiple cracks cause pollution in the river water, and some water

is lost down cracks. It may or may not re-appear on the surface further downstream, but even if it does it will be polluted. . Ecotoxic chemicals are released from cracks and fractures in the Hawkesbury sandstone, and the river water is contaminated with salt, nickel, iron and magnesium, as with other mine-damaged rivers in this area.

Both the Cataract and the Georges Rivers are still discoloured and methane is still erupting a decade after mining ceased. There were large fish kills in the Cataract in the 1990s, probably caused by reduced pH and dissolved oxygen levels.

Subsidence also de-stabilises cliff structures and causes rockfalls (there were 11 along the Cataract after mining). There are more details and related reports mentioned below in the second section.

Residents on the Cataract River won a 1998 court case against BHP Billiton for wrecking their river, which was a major tributary of the Nepean. It lost 50% of its flow down multiple cracks and it is still polluted.

Ever wider longwall panels in underground mines worsen subsidence effects, and so Rivers SOS has also called on the NSW Government to mandate narrower longwall panels near river systems. The company's plan for longwalls 320m wide was nevertheless approved without any attempt by the government at modification.

The company says that narrower panels would indeed potentially reduce risk but that even this small concession would "adversely affect resource recovery and mining economics."

It is shocking to find that our elected representatives are not at the very least insisting on some modification of mine plans which are obviously going to damage rivers, aquifers and wetlands.

We ask them to keep mining at least 1 k. from our river systems, and to insist on narrower longwalls, or better still, tell the mining companies to revert to other mine methods near rivers, such as the old bord and pillar technique which causes less impacts on the surface. Even better, coal near river systems could be temporarily left in the ground until such time as subsidence impact predictions are accurate and/or technology is invented by which coal can be extracted without the current level of surface damage.

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NB: The “methane site” is accessible for 4-wheel drive or a walk down path in gorge. We can also arrange a trip by dinghy, which would take about 15 minutes from causeway at Douglas Park.

