Submission No 41

INQUIRY INTO PERFORMANCE OF THE NSW ENVIRONMENT PROTECTION AUTHORITY

Organisation: The Colong Foundation for Wilderness Ltd

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The Director
General Purpose Standing Committee No. 5
Parliament House
Macquarie St
Sydney NSW 2000

Dear Sir,

Upper House Inquiry on the Performance of the NSW Environment Protection Authority

The Environment Protection Authority (EPA) should operate to protect the environment and the community from pollution arising from development, but tends to become captive of the industries it regulates.

EPA mission is to regulate pollution, and does not wish to be a quasi-determining authority in relation to development control. The EPA is reluctant to recommend refusal of a development when, for example, the pollution expected to be emitted by a proposal is borderline in relation to a pollution standard.

Environmental assessments for proposals that are big polluters, such as mining and industrial development, often place the EPA in the above situation. Modelling of pollutants in these assessments often indicate that the pollution arising from a development proposal may approach but not exceeded a pollution limit. If the development is then approved the activity may exceed a pollution standard. The environmental consultants can't be blamed for the modelling, as it appeared to be a marginal case, but when examined closely after the proposal is operational, the pollution is not marginal and critical matters were overlooked.

When development applications are assessed, the EPA's expert advice is obtained and generally followed by determining authorities where pollution control is required to prevent deterioration of environmental conditions. The EPA is not in a position to model pollution to be emitted from development proposals, but examines the models provided by the developers consultants. The EPA, however, generally accepts the perspective of the development company because it does not have the resources to independently assess proposals in a thorough manner and is often reliant upon the expertise of industry.

The EPA is also often caught in a dilemma of being unable to enforce pollution standards, as it is constrained by the concerns regarding the economic viability of a profit making operation. To my knowledge these economic constraints on pollution control are not

transparent, but operate on the decision making by EPA officers as a matter of professional judgement.

The EPA's independence in issuing and enforcing conditions on pollution licences is further weakened by its lack of independent sampling, resources for independent research, and sometimes inadequate expertise. In these circumstances the industry view becomes the EPA view, if not the only view of pollution abatement. Environment Protection Licence conditions under this paradigm become a process for avoiding Australian and New Zealand pollution "guidelines", rather than a means to achieve them.

The EPA should be able to adopt explicit and relevant performance measures for licence conditions, regularly monitor achievement of performance measures and modify licence conditions as needed to ensure compliance. What the Colong Foundation has experienced is that the EPA lowers licence conditions when pollution control measures fail to achieve the desired outcomes and that indeed perverse outcomes can result from good intentions. In other words, the EPA works with industry regarding a development, and it when pollution controls are constructed, if these controls fail to deliver the pollution abatement required by a standard, then consequent non-compliance is tolerated and accommodated through revision of the environment protection licence. This process ensures an industry's economic constraints are complied with, but can and often does fail to deliver desired environment and community protection.

Recommendations

To counter the above processes that tend to capture regulators, the EPA needs community and local council representatives on its Board to give a voice to the concerns of those who are independent of the licencing process. The EPA Board should provide feedback to the EPA executive when these representatives believe the EPA has been captured by their own processes and lost sight of their legislated objectives.

In order to be effective and meet its objectives the EPA must be adequately resourced for its licencing, regulatory enforcement, research and policy development roles.

Environment Protection Licence conditions must ensure Australian and New Zealand pollution guidelines are achieved through the application of world's best practice.

The EPA'S performance against its objectives

The inquiry has been asked to report on the EPA's performance against its objectives. The EPA is required under its guiding legislation to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development.

It is required to adopt the principle of reducing to harmless levels the discharge into the air, water or land of substances likely to cause harm to the environment.

Case study illustrating how the EPA fails to achieve its objectives

The Clarence Colliery on Newnes Plateau to the east of Lithgow is a highly regulated mine that is having a major negative impact on the sensitive and highly valued Wollangambe River, a wild river, in our largest declared wilderness in NSW, in the Blue Mountains National Park, that is part of the Greater Blue Mountains World Heritage Area.

The World Heritage area's values include outstanding diversity of habitats and plant and animal taxa, including a large number of plant and animal taxa of high conservation significance. The Australian Government has an international obligation, under the World Heritage Convention, to ensure the identification, protection, conservation, rehabilitation and presentation of the area and to ensure its transmission to future generations.

The World Heritage Area does not exist in isolation and adjacent land uses, like Clarence Colliery, can significantly impact on its values. Management of adjoining activities is critical to the long term maintenance of the World Heritage Area's integrity, including the maintenance of the ecological health of the Wollangambe River. The Colong Foundation is therefore very concerned that the Clarence Colliery has failed to curtail the serious environmental impacts it has on the World Heritage Area.

While the Colong Foundation is highly critical of Centennial Coal and the EPA regarding the Clarence Colliery, it is acknowledged that at least for this mine there is treatment and management of its effluent. For many NSW mines, the owners and the EPA have made little or no effort to chemically treat or manage toxic mine effluent. So, the Clarence Colliery is not so much an example of what happens when there is neglect, but an example of the perverse outcomes that can result when regulatory decisions are not made in an informed and timely manner.

The EPA licence for the 18ML/day of effluent emitted by this mine has failed for decades to impose meaningful discharge limits on the key impacts on the Wollangambe River. The Colong Foundation understands that this Inquiry will receive expert evidence from Mr Nakia Belmer and others on this matter, so I will only summaries the findings of this research.

Recent peer reviewed research by the University of Western Sydney researcher Nakia Belmer and others[1] confirmed that disposal of wastewater from Clarence Colliery into the headwaters of the Wollangambe River, a high conservation value waterway, has caused water pollution and ecological degradation. Electrical conductivity was found to be eleven times higher below the mine than above it and the concentration of zinc below the mine was ten times greater than the recommended ANZECC guidelines for aquatic ecosystems. Nickel is more than double the recommended guideline was reported. The mine discharge

also increased water temperature in the Wollangambe River by more than 2.5°C. The pollution has a severe adverse impact on a highly regarded, well-loved and popular wild river, the Wollangambe. Below the mine, macroinvertebrate richness has decreased by 65% and abundance by 90%. The loss then goes up the food chain impacting on fish, birds and platypi.

The researchers believe that the data clearly points to a need to review both the operation of the mine and the enabling regulatory system that does not adequately consider the impacts of the mine on the downstream National Park and World Heritage listed waterways.

They say the NSW EPA is failing to protect the Wollangambe River, water quality and aquatic ecosystems from degradation associated with coal mine wastewater through Environmental Protection Licence 726. Electrical conductivity and Nickel are not included in the licence and as the licence states that 'only pollutants listed on the EPL can be discharged' it is believed Clarence Colliery is polluting illegally.

Despite continuing contamination, both the NSW and Commonwealth Governments continue to provide approvals to expand and modify the mine's operations.

The researchers believe that the science is simple, the impact is significant, and the technical solution, a reverse osmosis treatment plant, would solve the problem. Why were highly risky solutions adopted instead of this technological solution? The Colong Foundation believes that the answer is that the company desired a least cost control measures and sought for over a decade for someone else to pay for the pumping to transfer of this pollution out of the Wollangambe River catchment.

The Colong Foundation's contribution to the review of this case study is to reveal that the pollution has been known for more than 15 years!

It has been 15 years since Centennial Coal admitted that the colliery was unable to meet the water quality discharge standard for what was the standard. The Wollangambe River was classified as 'Protected Waters' but all efforts to clean up the mines toxic effluent have ended in failure. The mine pumps currently around 18 megalitres/day of toxic saline effluent into the otherwise pristine Wollangambe River.

Canyoners who recreate in the river can be forgiven for assuming that the mine effluent is benign. Since 1985 up to 30 per cent of daily effluent production is transferred to a storage dam on Farmers Creek, part of Lithgow's water supply. These transfers do not flow through a properly engineered system but rather a deep trench these discharges have eroded in a nationally endangered upland swamp.

Incredibly the Farmers Creek, a drinking water supply, was classified as 'Specially Protected' under the Clean Waters Regulation 1972 and so protected from any source of pollution. Yet the mine effluent discharged to this water supply is contaminated with nickel and

Centennial Coal has known about this pollution since the CSIRO undertook water and sediment studies at the mine in 1996.

Aware of its water quality problems, in March 1999 the company proposed a new water management scheme for Clarence Colliery noting that pollution of the Wollangambe River '*is not an option that is acceptable to Centennial, the Department of Land and Water Conservation, Lithgow City Council or the Environmental Protection Authority*.' A company report stated that '*if the current system is allowed to continue indefinitely, the discharge of such water into the Wollangambe would be considered a breach of the Clean Waters Act, 1970, rendering the mine liable to prosecution*.'

Initially Centennial Coal proposed a new management system that would divert the effluent to the Coxs River catchment. This was to have provided water for Lithgow's power plants which turn tens of megalitres a day into water vapour. On the way to these power plants the mine effluent would dilute sewage that enters the lower parts of Farmers Creek from the Lithgow sewage treatment plant. On the World Heritage celebration day held in May 2001 the Colong Foundation even celebrated the decision by Centennial Coal to restore the Wollangambe River to its pristine state by diverting mine pollution. It was a celebration that proved to be naïve and too soon, as Delta Electricity did not want the water.

A water transfer augmentation scheme was then proposed to send more mine effluent to Lithgow's drinking water supply. The Colong Foundation opposed the additional transfer on public health grounds and Bob Debus ruled it out in November 2001. Finally, in 2005, an environmental assessment for the transfer scheme went ahead but the project then stalled for a number of years as debate continued over who would receive, and hopefully pay for, the transferred water.

Meanwhile the EPA freed from the requirements of the Clean Waters Regulation that was repealed in May 2006, weakened waste discharge standards for the Clarence mine in 2007 and again 2010. This was done because a water treatment plant upgraded in 2004 did not perform up to expectations, yet the effluent still exceeded its Environmental Protection Licence for the Wollangambe River. It is perhaps for this reason that the company again turned to the diversion of its effluent.

In 2012 the Federal Government offered $4 million to build the transfer scheme, and at this point the Colong Foundation wrote to Minister Tony Burke warning him that he had a duty of care to ensure that these transfers were compliant with Australian drinking water standards, particularly in relation to nickel. We pointed out that the Environmental Health Team of the Sydney West Area Health Service had detected the 18 nickel exceedances in Lithgow's drinking water supply between 2002–2005 and suggested this was linked to the colliery's effluent.

Shortly afterwards a 700mm diameter transfer pipeline was installed to the Farmers Creek water supply, but it did not last long. In the October 2013 Marangaroo wildfire reduced the above ground polyurethane pipe to a line of plastic goo welded onto the sandstone. The 1999 promise to clean up Clarence Colliery's pollution into the World Heritage Area remains unfulfilled.

How could this series of administrative blunders happen, so that mine effluent contaminated with nickel continues to be discharging into the Farmers Creek drinking water supply?

This case study reveals how the regulatory system works, not to protect human health or the environment, but rather tries to lower pollution toward a standard whilst minimising costs to industry. In this case finding someone else to pay for the pumping of the mine effluent, and then cross fingers that Lithgow's treatment plant will be able to remove the high levels of toxic metals now received by the water supply.

What the EPA should have done 15 years ago is identify the hazardous pollutants being emitted and based on the evidence of damage to the Wollangambe River issued a clean-up notice that required the removal of contamination from the discharged water.

The EPA is captive of its client industries, a problem recently exacerbated by the removal of community representatives on the EPA Board. Clearly in the case of Lithgow, council is also captive of the coal industry to the point where it allows its residents to be contaminated with nickel.

Thank you for the opportunity to make a submission.

Yours sincerely,

Keith Muir
Director
The Colong Foundation for Wilderness Ltd

Reference:

Belmer, N., Tippler, C., Davies, P. J. & Wright, I. A. (2014). Impact of a coal mine waste discharge water quality and aquatic ecosystems in the Blue Mountains World Heritage area, in Vietz, G; Rutherfurd, I.D, and Hughes, R. (editors), *Proceedings of the 7th Australian Stream Management Conference*. Townsville, Queensland, Pages 385-391.