

Hg Recoveries Pty Ltd

A Member of the UNEP Global Mercury Partnership

Partnership Areas: Mercury in Gold Mining, Mercury Supply and Storage,
Mercury Air Transport and Fate, Mercury in Products.

Heavy Metal Specialists

(ABN 87 144 752 885) (ACN 144 752 885)

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The EPA Secretariat,
PO Box 21428,
Little Lonsdale Street Vic 8011
(By email to info@epa-inquiry.vic.gov.au)

Dear Secretariat,

Please find Attached our submission to your enquiry. We have chosen to use your Question template for our submission.

1. **What do you think are the key environmental challenges which will impact the EPA in the future?**

The key challenge for the EPA will be to adopt worlds best practice for air, land and water pollution. The current VicEPA standards for these areas are seriously outdated by many years (and in some cases over a decade) and as a consequence, in some sectors, can and does lead to serious adverse outcomes for both the community and the environment.

Most major first world countries are now adopting USEPA standards for pollution guidance and VicEPA should follow this lead. USEPA has a massive budget to apply the science to make sure pollutants are not harming humans or the environment. It does not make sense either from a safety point of view or a cost point of view for EPA to continue to maintain its own outdated standards.

The imminent ratification of the Minamata Convention on mercury will create the need for the EPA to set up a mercury directorate to address the state wide problems with historical mercury pollution resulting from historical gold mining, ChlorAlkali plants and power stations.

Three years ago, rather than VicEPA address the extensive mercury pollution issues existing in Victoria, VicEPA changed the formal definition of mercury from being an internationally accepted "element" to that of mercury now being recognised as a "mineral"; a ludicrous situation that currently defies mercury's position as Element Number 80 in the Periodic Classification of Elements. Victoria is now the only State in the World that has reclassified mercury in this manner as a direct cynical attempt to avoid the need for remediation of this globally restricted highly toxic substance.

2. **What aspects of the EPA's work do you value and wish to preserve in the future?**

None. The original stand alone Statutory Authority that was created in 1970 is now controlled totally by DELWP which itself is the biggest toxic metal polluter in the State. This situation is a fundamental conflict of interest that many in the community regard as a major risk to the real health and safety of the public and the environment that VicEPA is supposed to be protecting.

A recent very worrying example of the decline in probity at the EPA was the incident at Costerfield late last year in which an EPA Inspector attempted to prosecute a farmer for allegedly illegally composting on his farm. The inspector had been called to the farm to investigate huge volumes of toxic dust blowing onto the farm from the construction of a mine evaporation facility for category A waste. The extent of pollution has now made this farm unviable. This type of behavior by a Environment Protection Authority employee would not be tolerated in most of the more developed Asian countries, these days.

3. **How can the EPA effectively work in partnership with other government agencies to meet the environmental challenges of the future?**

EPA was set up in 1970 to be a standalone Statutory Authority. EPA needs to be funded to the extent that it does not require to "work in partnership" with other government agencies to meet the environmental challenges of the future. Since late 2010, the EPA has basically been controlled by the Victoria's largest toxic metal polluter and the fact that the EPA Board allowed this situation to develop reflects badly on the quality of the board and top management of the EPA.

For more explanation of this issue see endnote #1.

EPA should be funded to scope the environmental challenges going forward and needs to be in a position where it directs how the other agencies respond to these challenges.

For more explanation of this issue see endnote #2.

The recent situation where the Acting Chief Health Officer gave advice to the people in Gippsland "that the fish in the Gippsland Lakes were safe to eat" prior to any independent testing of these fish being conducted is a case in point. This statement was made despite extensive testing in 1977-78 indicating serious mercury contamination exists across this marine food chain, together with limited testing in 1999 which clearly demonstrated a 58% increase in mercury accumulation in the single species chosen.

This was an investigation that should have been carried out by VicEPA, but instead was carried out by the already grossly conflicted Health Department under the direction of its Acting Chief Health Officer.

It is very pertinent to the points I am raising here to note that even today the Acting Chief Health Officer will not publicly release the analytical results of his investigation.

4. **How can the EPA's role in safeguarding the community against the health impacts of pollution be clarified or strengthened?**

By adoption of Worlds best practice environmental standards. The current standards enshrined in the State Environment Protection Policies (SEPP's) are hopelessly out of date by a decade or more and do not contain standards for many of the highly toxic and often carcinogenic substances that are commonly found in concern concentrations in legacy mining areas of Victoria.

5. **How could statutory frameworks more effectively prevent future environmental risks and land use conflicts?**

There is a statutory conflict between the MRSDA (Mineral Resources Sustainable Development Act) and the EPA Act. The MRSDA is focused on mining development in Victoria and how that mining development takes place. EPA sees its role as relating to the pollution that flows from a licensed mining site but lacks modern sampling equipment, and especially so for the main mining air toxicants such as mercury, cyanide, arsenic, antimony, beryllium, nickel, chromium, cadmium, vanadium and thorium.

This situation very often results in the EPA having to use the same conflicted consultants that also work for the mining industry.

6. **What role should the EPA play in emergency management?**

EPA should be supplying technical data to the first responder agencies and have a critical role to play in emergency planning. EPA should be maintaining the data base on hazardous chemicals and metallic substances, currently held by WorkSafe. This data base should be available online for emergency services at a first responder level. EPA should also be given the resources to train first responders in all aspects of toxic risks assessment.

There is currently a very serious potentially fatal issue with the States "Controlled" burning program. Areas are selected according to their fuel loads and in many areas historical gold mining areas are burned. These "controlled" burns can create significant volumes of gaseous mercury and arsenic from the residual mercury and arsenic present in historical gold workings.

This gaseous mercury is capable of traveling long distances in river valley's and is capable of causing serious injury to people who inhale this gas. Currently the Coroners Court does not test for mercury in cases of sudden deaths in the vicinity of bushfires or controlled burns.

EPA as an organisation should reverse it's current view of mercury being a mineral and either set up a special inspectorate to advise DELWP, or hire in internationally experienced mercury experts to advise DELWP on its controlled burning program. DELWP is after all the major mercury polluter in Victoria as a direct consequence of its burning program. It is only a matter of time before a controlled or uncontrolled burn causes major death and injury due to gasification of mercury from a historical mining area.

7. **How can the EPA better identify and, where necessary, address problems that are the result of past activity?**

EPA should be funded to set up a core expertise in this area. The major toxic legacy in this State is not service station sites or industrial sites but legacy historical mining toxic metal emissions, both in solid and gaseous forms. Despite imminent ratification of the Minamata Convention, the EPA Board made the decision to illegally delegate its duties in this regard to the Deputy Victorian Government Solicitor, who currently runs a "Whole of Government approach to toxic metal issues in Victoria" - this action represents a subtle way of explaining a systemic cover up by the Government.

8. **What can the EPA do to avoid potential future problems?**

Appoint a capable experienced CEO and a board that has extensive environmental disaster management experience. EPA funding requires to be at least doubled so that the EPA can afford to hire more experienced capable managers and to pay redundancy to some of the current managers who have a long history of failing to perform in their respective positions.

9. **What role should the EPA play in improving environmental outcomes beyond those necessary to safeguard human health?**

At the moment there is a valid argument that VicEPA is not compliant with any of the purposes of the EPA Act, as outlined in the current legislation.

As one of the original authors of the EPA ACT it is distressing to hear rural community leaders referring to the EPA as the "Environmental Polluters Authority".

10. **What role should the EPA play in reducing greenhouse gas emissions?**

As one of the original Peer Review team for Kyoto Protocol green paper, I feel that I am well qualified to talk on this issue. The role for the EPA if it is structurally rehabilitated, would be to focus on landfill gas emission and in particular mercury emissions from landfill gas engines due to the uncontrolled dumping of mercury vapour lights in landfill, power station emissions and the statewide critical issue of controlled burns in historical mining areas.

11. **How do you see environmental justice being applied to the work of the EPA?**

The current management of the EPA do not even understand the concept of Environmental Justice. You only have to look at the serious/negligent EPA failures to regulate the mines at Costerfield, Woodvale Ponds, Kangaroo Flat in Bendigo, the Stawell mine, the failure to enforce the clean up of the Upper Goulburn River, the Thomson River and the failure to conduct or at least oversee the investigation into the Gippsland Lakes mercury in fish study when it became apparent to the Gippsland Community that the Acting Chief Health Officer

was acting in a seriously conflicted role.

If you examine the role of the first EPA CEO, Brian Robinson, he had the necessary foresight to spend money on researching the historical mining issues, financially encouraged the Universities to carry out pollution research, as well as he spoke up and was critical of any person or organisation that polluted.

These days the EPA is controlled by the States biggest polluter, it has illegally delegated its powers to a Senior State legal officer which directly contradicts its own Act of Parliament, and has not publicly withdrawn this illegal delegation.

Environmental Justice is an oxymoron as far as the current management of the EPA is concerned.

12. **What can we adopt from other regulators and regulatory models to implement best-practice approaches and ensure that the EPA can rise to key future challenges?**

Adopt worlds Best Practice by adopting the USEPA pollution standards and thus deliver to rural Victorians in particular for the first time, a safe environment in which to live and farm.

13. **Are there any other issues relevant to the Terms of Reference that you would like to raise?**

The time has come for Victoria to have an Environmental Ombudsman where the community can have direct contact to seek investigation of environmental issues of concern. In 2013, I gave similar advice at the Enquiry into NSW EPA.

Victoria does not have a proactive Health Department that reviews public health data for the sole purpose of isolating public health issues which might just be the result of impacts from toxic metal issues extant in our environment. Bendigo and surrounds exceedingly high levels of arsenic induced skin and bladder cancers (to cite a few of the more common afflictions), is but one case in point!

As another example, there is a VicEPA sanctioned mine in Western Victoria which currently emits to air in excess of 21.3 kg per hour of cyanide and 61.6 kg an hour of sub-micron particles. This mine is very close to a township of 6000+ people.

This data comes from the National Pollution Inventory (NPI) which is administered in Victoria by the EPA. The residents of this township could not get this data from the NPI website because for some unfathomable and "perhaps convenient" reason, this mine's icon on the NPI Data base has been relocated into the Grampians National Park!

Cyanide is a very serious toxicant and can, even at low exposure, produce Parkinson's disease symptoms even in very young people. The screening level for residential air as quoted by the USEPA, is 0.083 ug/m³ (e.g 0.083 of a part per billion in the air). One should note that VicEPA does not even have screening levels!

EPA sometimes attends ERC (Environmental Review Committee) meetings for this mine where the mine reports on its emission of dust. The residents have never been told that the mine is actually emitting 61.6 kg per hour of submicron particles - all the community is told is that the air monitoring is below the EPA PEM standard.

So, here we have the farcical situation where VicEPA controls the data that the mine provides under National Environmental law, but has never informed this community that this data is available. This data is never mentioned in the mines ERC report, either. The residents were horrified to find out that the mine is actually emitting into the air that blows over their township, at least 11 different carcinogens and cyanide.

Is it truly any wonder that the EPA is viewed by this particular community "as being just an

extension of this mine" and is, therefore, not to be trusted?

As a professional toxic material disaster manager when reviewing these authorities involvement or performances, I have to wonder where the line between negligence and criminal culpability actually lies!



Andrew Helps

Endnote: 1.

In 1986, following a number of incident involving prospectors and children being trapped in disused mines. The then Secretary of the Police and Emergency Services Ministry allocated some funds to enable VicSES volunteers to assess a small catchment that had been subject to intense hard rock mining. I was mine rescue co-ordinator for VicSES at the time. The chosen catchment was the Sailor Bills catchment at 10 mile in the Upper Goulburn River catchment.

Detailed assessment identified uncapped ventilation shafts, uncapped shafts, and large underground excavations where the timber supports had rotted. A one site where it was clear a crusher had operated there was liquid mercury on and in the bedrock in the adjoining creek. There was extensive evidence that children had been playing in this man made rock pool probably in the summer period. This matter was reported to the Forest Commission at the time and the Commission responded that it probably had many hundreds of such sites across the State and it was waiting for EPA to inform it how these sites were going to be remediated.

Following the issuing of our Federal EPBC permit to recover the mercury in the Upper Goulburn River and the EPA clearance to do this work we identified this catchment as a priority for remediation due to the fact that some of the water in this creek was used as drinking water by a resident with a wife of child bearing age and a number of small children.

The road into this mine complex was overgrown with blackberries and invasive alien and native species. We took two senior DSE officers for an inspection of this road and lodged with them a workplan for the slashing of the invasive species on the roadway.

When we started this work, DSE sent an investigation officer and two other staff (one of them armed with a handgun) out to interviewed us under formal caution for the alleged crime of destroying forest product (i.e blackberries). We were told that our equipment would be seized and we could face a jail sentence.

This highly polluted mining area is still polluting the waters of the Upper Goulburn river. I have personally wound up with a conviction against my name without the benefit of being able to argue the case and defend myself in court.

Endnote:2.

Victoria is experiencing a massive move to a food export based economy and it seems to have escaped the notice of the political promoters of this move that many countries that wish to buy Victorian food products have limits on the chemicals and heavy metals in their imported food products.

Last year, independent testing of sheep from farms around the Costerfield Antimony mine demonstrated that these animals had at least 4 carcinogenic toxic metals in their organs and lungs. DHHS did not believe this testing, so consultants hired by ECODEV (the re-badged DSDBI) did extensive testing of sheep. One farmer managed to get the data from a sheep from his farm and this data indicated a serious issue with cadmium in the organs. The farmer was advised by the Agriculture Department that his animals were "safe to sell into the local market". This sort of complacency could very quickly wipe out the meat export industry from Victoria.

The various regulators in Victoria seem to be oblivious to the fact that plants also accumulate heavy metals and many of these heavy metals especially the carcinogens Antimony and Arsenic can accumulate at high level in groundwater (the groundwater at Costerfield has on average 27,000 ug/L (micrograms) of Antimony per litre (VicEPA Category A prescribed Waste) - the Australian drinking water guideline is at 3 ug/L (USEPA at 0.78 ug/L). The Upper Goulburn River in flood averages Arsenic at 68 ug/L, the Australian drinking water guideline is at 10 ug/L (USEPA at 0.052 ug/L).

Whilst VicEPA will claim the this pollution in waterways and groundwater is a Catchment Management Authority issue, the reality is that EPA as the primary regulator has been complicit in allowing these highly polluted waters to enter the environment.

At Costerfield, EPA permitted the mine to dump at least 400,000 tonnes of the highly Antimony polluted water (Category A prescribed Industrial waste that by the EPA's own regulations has to be treated on site to make it safe) into an abandoned open cut mine pit. By dumping this water into the mine pit the mine saved the cost of treating this waste through the Reverse Osmosis plant.

This toxic carcinogenic Category A waste is now leaking into the environment and on a number of occasions the EPA has been asked to put a treatment plant on the site to treat this water before it destroys the local ecosystems. So far, EPA has failed to take responsibility for this major pollution event.