

**INQUIRY INTO COSTS FOR REMEDIATION OF SITES
CONTAINING COAL ASH REPOSITORIES**

Name: Name suppressed

Date Received: 12 February 2020

Partially
Confidential

Regarding: Parliamentary Inquiry into TOXIC Coal Ash WASTE.

Attention: Representatives of the Voting Citizens of NSW

Following your invitation for submissions, please accept the following as my submission to the Parliamentary Inquiry into TOXIC Coal Ash WASTE.

As one of many Voters and Residents of NSW, I want to bring the following to your attention:

Coal-fired power has long been associated with air pollution and climate change. But coal-fired power stations produce another insidious waste problem, hidden in plain sight. When coal is burnt to make electricity, it produces tens of thousands of tonnes of toxic ash waste. At most coal-fired power stations in Australia, coal ash is mixed with saline wastewater and pumped into enormous dumps creating a lethal cocktail of toxic sludge including heavy metals and dangerous pollutants like mercury, lead, arsenic, selenium and chromium. Coal ash is one of Australia's biggest waste problems and accounts for nearly one-fifth of the entire nation's waste stream. Toxic slurry from poorly managed ash dumps across the country is contaminating water and soil needed by farmers and ecosystems, and leaching into rivers and lakes where our families fish and our children swim. Those dumps left to dry out, are blowing ash dust onto nearby communities who breathe toxic particles deep into their lungs. The toxins in coal ash have been linked to asthma, heart disease, cancer, respiratory diseases, nervous system damage and stroke. Although the health and environmental impacts of air pollution are becoming more well known, very little research has been done in Australia on the health and environmental impacts from water and soil contaminated by coal ash. Lax government regulation is putting communities that live near coal-fired power stations at serious risk. Coal ash cannot be disposed of safely. Even with best practice methods, there remains a significant contamination risk to the environment and communities. Coal ash dumps must be carefully and strictly managed and rehabilitated to minimise the risk this toxic substance poses to human and environmental health. Australian governments must make these coal-fired power stations thoroughly clean up their act. Poorly constructed ash dumps in Australia, including Eraring, Vales Point, and Loy Yang, should be re-sited, re-constructed and managed to allow for a comprehensive clean up of existing contamination.

COAL ASH IS A SERIOUS THREAT TO HEALTH:

Burning coal concentrates toxins such as heavy metals naturally found in coal. This means that coal ash contains a much higher concentration of toxic pollutants and metals on a per volume basis compared to its raw form. Toxic elements in coal ash include arsenic, lead, cadmium, mercury, selenium, silica and other dangerous chemicals. These toxins cause a range of health impacts in every major organ of the human body (see image below) including cancer, kidney disease, reproductive harm, and damage to the nervous system, especially in children. A United States Environmental Protection Agency (US EPA) risk assessment found that living near unlined ash dumps increases the risk of damage to the liver, kidney, lungs and other organs as a result of being exposed to toxins at concentrations far above safe levels. Another recent United States study found the prevalence of health and sleep problems were significantly greater in children living near coal ash dumps.

COAL ASH IS A TICKING TIME BOMB:

KINGSTON, TENNESSEE, USA In 2008, 4.9 million tonnes of coal ash sludge flooded an area of 300 acres when a dike suddenly collapsed at the Tennessee Valley Authority Power Station in Harriman, Tennessee. The toxic sludge swept away multiple houses, filled two rivers, and destroyed a residential community. Clean-up of the coal ash took years and cost over US\$1 billion. More than 30 clean-up workers died of illnesses allegedly caused by exposure to the toxic ash during the clean-up, and more than 200 remain ill, ten years after the disaster. In 2018, sick workers and families of the deceased workers won a lawsuit for liability against the clean-up contractor who refused to allow the workers to wear protective respirators. Coal ash is already causing environmental harm in Australia. We've had coal ash pipes spill thousands of litres of toxic slurry into rivers, coal ash blow over and choke communities, groundwater contamination, and toxins from coal ash dumps poison nearby aquatic ecosystems. In May 2019, the much-loved community sports and recreation centre at Myuna Bay on the NSW Central Coast was shut down over structural fears that the Eraring ash dump would collapse in the event of an earthquake. LAX GOVERNMENT REGULATION IS PUTTING COMMUNITIES AT RISK The regulation of coal ash dumps throughout Australia differs from state to state, is inconsistent between dump sites, and does not adhere to best practice construction, management or rehabilitation standards as practised in other parts of the world.

THE NSW GOVERNMENT IS LEGALLY RESPONSIBLE FOR MUCH OF THE REHABILITATION OF THE COAL ASH DAMS:

When power stations were privatised in NSW, the NSW Government retained liability for the rehabilitation of coal ash dams (to the degree that the state was responsible for all coal ash produced whilst it was the operator and owner of the power stations). This includes the coal ash dams at Vales Point and Eraring power stations on the NSW Central Coast. So, while the power stations are privately operated (and obtaining significant financial benefit from operating a utility we all rely on), the NSW public is responsible for much of the rehabilitation of the coal ash dams.

THE NSW GOVERNMENT MUST INVESTIGATE THE COST OF CLEAN UP AND THE BEST WAY TO DO IT:

The NSW government does not know how much comprehensive rehabilitation of coal ash dams will be required or how much it will cost. We also don't know how it will be done. The NSW Environment Protection Authority (EPA) does not require power stations to prepare rehabilitation plans until they close. This is a huge problem, because it represents a significant roadblock in the transition from coal – after all, you can't implement closure and rehabilitation plans that don't exist.

COMMUNITIES THAT LIVE NEAR COAL ASH DUMPS ARE AT RISK AND MUST BE CONSULTED:

Coal ash repositories pose the most risk to the communities and environments closest to them. The Public Works Committee must hold hearings for the Inquiry in those communities, including on the NSW Central Coast, Lithgow, and Hunter Valley.

The laws and regulations that govern coal ash are plainly inadequate to protect the environment and communities. The best way to ensure that coal ash dams are comprehensively managed, remediated and rehabilitated is to develop coal ash dam specific Regulations under the Protection of the Environment Operations Act 1997 (NSW). These Regulations must include mechanisms to ensure that existing and potential on-going contamination is cleaned up, including removing ash from its current repository and being placed in a purpose-built site constructed to best practice standards.

THE NSW GOVERNMENT SHOULD CONDUCT AND PUBLISH BASELINE STUDIES OF EXISTING CONTAMINATION:

The costs associated with coal ash dams are not just financial. Other costs include the impact of loss of marine ecosystems, the loss of community space, the inability for local government to use land in the future, and the employment costs in not creating jobs in the coal ash reuse market and employment associated with comprehensive remediation. The NSW Government should conduct and publish baseline studies of existing contamination at the currently operational power stations.

THE NSW GOVERNMENT MUST INVESTIGATE THE ECONOMIC AND ENVIRONMENTAL BENEFITS OF COMPREHENSIVE REHABILITATION AS PART OF A JUST TRANSITION.

Transition for communities who bear the pollution burden of coal-fired power must include ensuring that environmental justice is achieved for everyone. The NSW Government must investigate the economic and environmental benefits of comprehensive rehabilitation as part of a just transition. In addition to this, the NSW Government must conduct and publish an audit of the extent of coal ash reuse from the state's five operating coal-fired power stations and provide opportunities for coal ash to be reused in a safe way.

THE NSW GOVERNMENT MUST MAKE INFORMATION ABOUT COAL ASH DAMS TRANSPARENT AND AVAILABLE.

The public should have access to information about coal ash repositories transparent and available, including all groundwater monitoring data (current and historical), all existing management plans, details of Sale and Purchase Agreements and baseline contamination studies, rehabilitation plans, pollution incidents, fines and other enforcement actions taken by regulators, monitoring data, hydrogeological assessment, predictions for future contamination, and predictions for future land-use planning.

POWER STATIONS MUST BE REQUIRED TO PREPARE COMPREHENSIVE REHABILITATION AND CLOSURE PLANS.

This process needs to include the community who live around the sites. See pages 50-52 of EJA's report *Unearthing Australia's Toxic Coal Ash Legacy* for more information on what safe closure planning involves

- Coal ash is one of Australia's biggest waste problems and accounts for nearly one-fifth of the entire nation's waste stream.
- Toxic slurry from poorly managed ash dumps across the country is contaminating water and soil needed by farmers and ecosystems, and leaching into rivers and lakes where our families fish and our children swim. Those dumps left to dry out, are blowing ash dust onto nearby communities who breathe toxic particles deep into their lungs.
- Lax government regulation is putting communities that live near coal-fired power stations at serious risk. Coal ash cannot be disposed of safely. Even with best practice methods, there remains a significant contamination risk to the environment and communities.
- The toxins in coal ash have been linked to asthma, heart disease, cancer, respiratory diseases, nervous system damage and stroke. Although the health and environmental impacts of air pollution are becoming more well known, very little research has been done in Australia on the health and environmental impacts from water and soil contaminated by coal ash.
- A United States Environmental Protection Agency (US EPA) risk assessment found living near unlined ash dumps increases the risk of damage to the liver, kidney, lungs and other organs when people are exposed to toxins at concentrations far above safe levels.
- In 2019 the Hunter Community Environment Centre (HCEC), based in Newcastle, NSW, conducted water and sediment sampling in Lake Macquarie near water discharge points close to both the Vales Point and Eraring power stations. The results showed concentrations of a number of heavy metals,

including arsenic, nickel, aluminium, copper and lead, at levels likely to be having a harmful impact on aquatic ecosystems, including edible fish, molluscs and crustaceans. Alarming, selenium concentrations found by HCEC at the Eraring power station ash dump overflow point are 55 times higher than the level recommended to protect birds and fish.

- In March 2019, fears over the structural integrity of the Eraring ash dump in the event of an earthquake forced the closure of the adjacent Myuna Bay Sports and Recreation Centre - enjoyed by the NSW Central Coast community since 1944. The centre is now being forced to relocate.
- Both the NSW Department of Planning, Industry and Environment and the NSW Environment Protection Agency (EPA) have provisionally approved the expansion of Eraring power station's coal ash dump, despite fears the ash dam wall could fail in an earthquake, and despite this Inquiry being incomplete.

Please record the above as an official submission to this inquiry.

Can you please also confirm that you have received this submission and advise me of the outcome of this enquiry?

Yours Sincerely