

Submission - Eraring Power Station - Ash Dam Expansion MOD 1 [07_0084]

Greenpeace Australia Pacific (GPAP) welcomes the opportunity to comment on the application to extend the life of and expand Eraring Power Station's ash dam. GPAP has over a million supporters and we are part of a global network that uses research, investigations and non-violent creative confrontation to force solutions to the world's most pressing environmental problems. We are entirely independent and do not accept donations from governments or corporations. We are writing to object to the modification for the following reasons:

- The proponent has not adequately identified the "Do Nothing" option
- The extension of the ash dump will cause serious and unacceptable impacts to the environment and to the health of the local community
- The proponent has no long term plan for the closure and remediation of the ash dump
- The proponent has failed to identify the heavy metal contamination and air and water pollution associated with the project
- The attached report by SCT Operations identifies severe deficiencies in the subsidence risks from the abandoned Awaba underground colliery, which interacts with surrounding surface water systems
- The proponent has missed its ash reuse targets by a wide margin
- The environmental history of the proponent

Although we have not had an opportunity to examine the proposal in detail, GPAP is willing to provide supplementary information in support of our submission.

Introductory comments

Coal ash is one of the enduring legacies of the coal industry, with 13 million tonnes of ash generated annually in Australia and 211 million tonnes lying in inadequately lined ash ponds, open-cut mines and landfills around the country. Due to the difficulty in finding viable re-uses for highly toxic ash, coal ash will ultimately come to be seen as the coal industry's equivalent of nuclear waste to the nuclear generation industry.

Coal ash contains high concentrations of toxic heavy metals that are carcinogenic and attack the immune, neurological and reproductive systems, including cadmium, boron, molybdenum and selenium. Exposure to coal ash at low levels over an extended period of time can result in severe health problems, especially in children, as toxins travel through the air on dry, dusty days and interact with aquifers to enter the water system and the food system through molluscs and filter feeders. Accumulation of metals in the environment also causes harm to surrounding ecosystems.

Recent rapid declines in the costs of renewable energy and storage technology combined with the increasing risks associated with an ageing coal fleet are changing community expectations and eroding the industry's social license to continue adding to the stockpile of ash in unlined ponds. The proponent's failure to properly identify project alternatives is a demonstration of contempt to the community. The proponent has no long-term plan for how to manage its toxic legacy, noting only that "investigation of a number of options... are being identified to identify a long-term ash disposal solution to allow operations to continue until 2032". Notwithstanding the fact that the power station has been operating since the early 1980s, it is intolerable that a company should be allowed to continue exacerbating a problem that it has no idea how it will

solve. Changes in government policy combined with the declining costs of disruptive entrants in the electricity market mean that there is a significant risk that the proponent will abandon the ash dam, leaving the problem to solve to the community and the taxpayer. This is not a remote possibility - it is highly likely and indeed foreseeable. Indeed, it was exactly the experience of the Port Augusta community who were left choking on clouds of ash when Alinta shifted the vehicle that was the legal owner of the power station into an entity headquartered in the Cayman Islands, avoiding liability for remediation.

Failure to adequately identify the “Do Nothing” and project alternatives

The requirement to identify a “do nothing” option along with alternatives to a project ordinarily involves the consideration of alternative technologies, designs, locations, methods and plans. Although the question of how the proponent will deal with the existing ash stockpile remains unresolved, the proponent has failed to demonstrate why it would not be able to avoid adding to the stockpile by developing a renewable energy and storage project to replace the existing plant.

While the proponent may argue that there are reasons that such an alternative would not be optimal, including cost, timelines, business strategy, organisational risks and political uncertainty, the enunciation of those reasons is precisely the purpose of the consideration of project alternatives in the application. The omission is even more notable in line of the the proponent’s highly contestable central argument in section 3.1 that increased output from Eraring Power Station is essential to energy “market demand and system security”. Indeed, AEMO’s recent systems plans identified investment in transmission, demand response and a focus on improving dispatchability (as opposed to coal-fired power stations which have long ramp times) was key to promoting system security.

Impacts on community and environment

When it is released into the air and breathed in on dry and dusty days, or when it leaches into water systems, coal ash causes serious problems both for people and for the environment. As discussed, coal ash contains high concentrations of toxic metals that cause respiratory, immunological, neurological and reproductive problems. Coal ash also can poison and sterilise fauna species such as fish and molluscs and lead to localised dead-zones.

While the proponent has argued that the increase in the stockpile of coal ash stored will not lead to a significant increase in emissions from the facility, it has not produced data to demonstrate this. Additionally, proponents are required to identify the cumulative impacts of projects, but the proponent has failed to quantify the impacts of the existing dam in addition to the proposed extension and expansion. This is important since in the absence of this application the dam would meet the end of its life earlier. The proponent should also be required to identify the combined impacts of multiple operating and disused power stations and associated ash dams on the surrounding environment.

Lack of long-term plan to remediate the site

Despite the lack of good examples of complete remediation of ash dams globally, the Department should not consider the proponent’s application to extend the life of this dam unless a full remediation plan has been developed. There is no reason to believe that the difficulties in identifying suitable remediation options will improve at the conclusion of the project’s life. The

project points to multiple uncertainties including changing markets for post-coal combustion products to justify its failure to identify a remediation plan. That uncertainty becomes transferred to the public and the taxpayer, who should not be required to bear the cost of the long-term impacts of the project.

A failure to adequately deal with this issue raises concerns about the proponent's intention or willingness to develop such a plan.

Insufficient identification of impacts

The proponent has not identified the heavy metals that would be concentrated in the coal ash or emitted to the surrounding environment. This is a critical failure of the EIS as it does not allow stakeholders or the Department to identify and attempt to avoid, mitigate or otherwise deal with the impacts caused by the project. A revised EIS should include the cumulative impacts of heavy metal contamination from the Eraring Power Station and surrounding facilities.

We note with concern that the EPL does not provide load limits for the full suite of heavy metals emitted by the facility and this should therefore be covered by the project conditions.

Subsidence risks

The proponent commissioned AECOM who in turn commissioned SCT Operations to assess the impacts of extending the ash dam footprint over the abandoned shallow underground mine workings of the Awaba colliery. The report identified at least one sinkhole, noting that there would almost certainly be more, and the high risk of contamination of both the underground mine workings and surrounding aquifers including Dora Creek through both sinkholes and connectivity. SCT noted: "The EA does not appear to recognise or address the major hazards identified in Section 3 of this report."

It is alarming that insufficient attention seems to have been paid to this significant risk and that the proponent envisages to place coal ash in stockpiles over part of an underground mine. We do not consider that back-filling of the underground mine would on its own be sufficient to mitigate the risk of heavy metals travelling through the backfill in different weather conditions. No attention appears to have been paid to the risk of seismic activity in relation to the Awaba colliery.

Failure to meet re-use targets

The proponent has set itself a re-use target of 80% but notes that it is unlikely to meet it, having only been able to re-use 37% to this point, and further noting that the market for construction activities is beyond the control of the proponent. Given the abundance of coal ash in Australia, and the lack of newly discovered uses for the toxic substance, there is no reason to believe that a new market for coal ash far beyond historic demand will appear. It is well recognised that re-use is insufficient to deal with the legacy of coal ash.

Environmental history of the proponent

The proponent's history of non-compliance should be factored into the Department's decision in whether or not to approve the modification.

Origin has had four penalty notices and one prevention order recorded on the POEO register. On 13 January 2017, the proponent was fined \$15,000 for an incident that occurred on 27 September 2016 when a large cloud of ash escaped from the dam triggering multiple public complaints. At the time the EPA called the proponent's conduct unacceptable. Community records of other incidents have not triggered enforcement action by the EPA or the Department.

Recommendations

- The Department should reject the application
- The Department should not approve any application from the proponent that does not include a full assessment of the "do nothing" option and project alternatives, a full cumulative impact assessment including measurements of heavy metal pollution and a comprehensive closure and rehabilitation plan

Please do not hesitate to contact us if we may assist further.

Kind regards,

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