SYDNEY WEST AREA HEALTH SERVICE | NSW HEALTH

Area Executive Office
Nepean Hospital Campus
PO Box 63
PENRITH NSW 2751
Telephone: (02) 4734 2120
Facsimile: (02) 4734 3737

PCU016972

Our Ref: TRIM 10/
Your ref: Application Number: S09_01810

NSW Department of Planning
GPO Box 39,
Sydney NSW 2001

Attention: Kate Masters
kate.masters@planning.nsw.gov.au.

Dear Ms Masters,

Mt Piper Ash Placement Project

The Sydney West Area Health Service Centre for Population Health has reviewed the above project proposal and would like to make the following observations and recommendations.

Air Quality
Emissions from the site predicted to be mainly particulate matter in the coarse fraction of PM_{10} or larger. Coarse fraction PM_{10} has the potential to exacerbate asthma in sensitive people and can result in other adverse health effects predominantly on respiratory conditions. Any exposure of local residents to particulate emissions should be minimised as far as possible.

The proponent has conducted an air quality assessment including modeling on the operational phase of the project. This indicates that the greatest expected PM_{10} emissions are during ash placement and that a moderate to substantial impact could occur at the closest residences during operations if effective environmental controls are not employed. It is noted that the predicted impacts have not taken potential mitigating effects into account, and as such may represent a worst case estimate.

The air quality assessment report (page 20) states that measurement data has shown that background PM_{10} are highly variable and that it is likely that the DECCW's $50\mu g/m^3$ criterion is exceeded in the region on a number of occasions a year. However we note that the background particulate matter data is from Bathurst, so may not take account of local sources of particulate matter such as coal-fired power stations, existing ash emplacements, local use of solid fuel heaters and open cut coal mining. Thus existing particulate air quality may be poorer than assumed in the assessment.

At the most sensitive receptor (1) the predicted increment annual average PM_{10} is $4.5\mu g/m^3$ which is a substantial increase. The predicted maximum daily increment at the same location is also substantial at $15\mu g/m^3$.

The air quality assessment considers only the first proposed ash emplacement site. Given the relative locations of the other proposed sites and prevailing wind directions it is possible that air pollution impacts on sensitive receptors will be more marked when operations move to the subsequent locations.

Given the probable existing high background concentrations of PM_{10} air quality modeling should also be conducted on the development stage of the proposal. It is noted in the project description that before each site is operational major works would be required which could potentially create a dust problem on sensitive receptors including:

- Clearing and Grubbing: In advance of ash placement, areas designated for ash placement will be cleared of any vegetation and unsuitable founding materials. Clearing and grubbing would be undertaken using dozer and or excavators;
- Re-grading/re-profiling: Earthworks comprising relocation and rehabilitation of stockpiles and excavation areas remaining from previous mining activities and grading of base areas for placement of ash materials. This activity would require the grading of the site with dozers and/or graders and stockpiling and/or hauling of materials across the site to required surface levels;
- Earthworks and Fill Construction
- Temporary Rehabilitation and Stockpile Remediation
- Creation of access and haul roads, and
- Construction of drainage works and water and sediment dams.

Recommendations:

1. Air quality modeling should be undertaken for each site prior to approval and include construction stage emissions .
2. Proposed mitigation measures such as use of water spray and molasses to exposed surfaces and use of water trucks on unpaved haul roads to suppress dust generation during the expansion and operation stages of the development should be required to minimise air quality impacts on local residents. If possible the mitigation measures should be linked to the proponents gaining approval to move to the next stage of the development
3. Monitoring of weather conditions such as wind direction should feed into operational planning of activities on the site to limit any generated dust from impacting on nearby residents.
4. Local particulate monitoring is recommended both to provide a mechanism to report results to the community, but also to provide information about exposure to air pollution in the region so that the impact of the current and future proposals can be properly understood.
5. A mechanism such as a community complaint hot-line should be required so that excessive dust impacts can be reported to the site and operations adjusted accordingly.

Noise

Environmental noise can affect health in a variety of different ways. There is evidence that noise can impact on health by causing annoyance and sleep disturbance, resulting in mental health and stress issues, as well as impacting on children's performance and learning. [1]

Operating hours of the facility are proposed to be from 6am to 8pm Monday to Friday and 6am to 5pm on Saturdays and Sundays. The early start of 6am could potentially cause increased risk of noise and sleep disturbance problems for local residents.

Recommendations:

1. The proponent should investigate the use of noise reduction barriers, such as bunding, fencing or increasing vegetation as appropriate, to protect local residents from any inappropriate increases in noise levels to the sensitive receptors.

---

1 enHealth, (2004) *The health effects of environmental noise –other than hearing loss*. Sourced 28/06/2010, Available at: http://www.dhs.vic.gov.au/nphp/enhealth/council/pubs/pdf/noise.pdf

2. A mechanism such as a community complaint hot-line should be required so that noise impacts can be reported to the site and operations adjusted accordingly.
3. That a downstream ground and surface water monitoring and a risk assessment of the leaching of contaminants from the ash repository under a range of rainfall conditions be done.

Water Quality

The main concerns in terms of drinking water quality relate to the risks of ash contaminants making their way into drinking water catchments either in Sydney in the Warragamba catchment or in rural community supplies. The security of containment measures in the event of a major flood is also vital for the protection of Sydney's major drinking water catchment

Recommendations:

1. SWAHS would concur with the Sydney Catchment Authority (SCA) recommendation that ground and surface water monitoring downstream of the ash repository be conducted and that a risk assessment of the leaching of contaminants under a range of rainfall conditions be done.
2. SWAHS would also concur with the SCA recommendation that drains to convey these flood waters be appropriately sited, engineered and stabilized.

If you would like to discuss the above submission please contact Helen Ptolemy, Environmental Health Team Leader on (02) 9840 3603.

Yours sincerely,

Heather Gray
Chief Executive
Sydney West Area Health Service