Interim Independent Expert ScientificCommittee on Coal Seam Gas and Coal Mining

Advice to decision maker on referred coal seam gas and/or coal mining project

Proposed action: Centennial Coal Mine Expansion – Springvale and Angus Place (NSW)	
Requesting agency	Department of Sustainability, Environment, Water, Population & Communities
Date of request	16 February 2012
Project title:	Mining of Longwalls 415, 416 & 417 at Springvale Colliery, NSW (EPBC 2011/5949)
	Mining of Longwalls 900 and 910W at Angus Place Colliery, NSW (EPBC 2011/5952)
Summary of request	The Department of Sustainability, Environment, Water, Population & Communities has assessed the proposed projects in accordance with the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> . The Department has developed draft conditions that are designed to mitigate potential impacts on matters of national environmental significance to an acceptable level.
	The Department sought independent scientific advice from the Interim Committee on whether the proposed conditions, in combination with the mitigation measures proposed by the proponent, are appropriate to mitigate potential impacts on matters of national environmental significance, particularly the endangered <i>Temperate Highland Peat Swamps on Sandstone</i> ecological community.
	As a final decision on the proposed action is due by 6 March 2012, the Interim Committee was requested to provide its advice as soon as possible (urgently, to minimise the period this decision may be late).

Advice

- 1. The Interim Committee notes that based on the limited information provided in relation to the proposed projects and the very short timeframe available for preparation of advice:
 - a. There appears to be a high risk of severe impact to the *EPBC Act* listed (endangered) *Temperate Highland Peat Swamps on Sandstone* that is present directly above or laterally adjacent to the proposed longwall panels associated with the Centennial Coal mining proposal; with this risk being greater for the proposed Springvale Colliery than the Angus Park Colliery;
 - b. The evidence that longwall mining under the Newnes Plateau may have at least partially contributed to previous damage to the listed endangered ecological community in that area suggests that the likelihood of the risk being realised is also high;
 - c. The mitigation measures proposed by the proponent are unlikely to reduce the risk or the likelihood of the risk being realised to an acceptable level;
 - d. There is little evidence that the suite of remediation measures proposed would be effective in repairing damage to the endangered ecological community if the proposed longwall mining did lead to impacts such as fracturing of a peat swamp basin. Previous experience with implementation of such remediation measures has shown little or no success.
- 2. Should a decision be taken to approve the proposed actions, the Interim Committee suggests that:
 - a. Draft condition 1 (which restricts longwall mining in areas directly below known high quality sites of temperate highland peat swamps on sandstone) is likely to significantly enhance the mitigation measures proposed by the proponent and may potentially reduce the risk of unacceptable impacts on the endangered ecological community, particularly if appropriate buffers that reflect the local geological characteristics are incorporated between the longwall

mining panels and high quality swamps. The Interim Committee supports the proposal that this condition could be revisited if the proponent is able to demonstrate that a proven technology or engineering methodology can be used that prevents the risk of subsidence in the listed ecological community, or that would allow any subsidence related impacts to be remediated.

- b. The decision maker may wish to consider refining the draft conditions relating to the proposed monitoring and management plan to require that a comprehensive plan be produced that takes into account the hydrological and geological context in which the swamps sit and extends the monitoring and management program to include:
 - i. potential geological and hydrological impacts in upstream tributaries that feed into the peat swamps and in areas laterally adjacent to peat swamps;
 - ii. potential downstream geological and hydrological impacts;
 - iii. potential lateral geological and hydrological impacts.
- c. The hydrological requirements of the peat swamps are not well enough understood to accurately predict the cumulative impacts of longwall mining.
- 3. Given the likelihood that further longwall developments will be proposed in areas containing the listed endangered ecological community, the Interim Committee agreed that it would seek approval from the Minister to commission a program of independent research into issues such as: the capacity to predict subsidence-related impacts on peat swamps from longwall mining; mitigation and remediation techniques, including self-amelioration; the hydrological and hydrogeographical characteristics o the temperate peat swamps on snadstone community; and the relationship of the orientation and dimensions of longwall mine plans to potential subsidence risk.

Date of 24 February 2012 advice