

Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) Meeting 80, 6-7 October 2021

MINUTES Videoconference

ATTENDANCE AND APOLOGIES

IN ATTENDANCE

Dr Chris Pigram (Chair) Dr Andrew Boulton Professor Craig Simmons Professor Jenny Davis Dr Jenny Stauber Associate Professor Phil Hayes (Items 1.5-1.8, 2 [6 Sep 9.30am-1pm, 7 Sep], 3 & 4) Professor Rory Nathan (Items 1.1-1.4, 2 & 3.2) Professor Wendy Timms

OFFICE OF WATER SCIENCE (OWS)

Alison McMorrow, Assistant Secretary Biodiversity Policy & Water Science (Items 1.1-1.4 & 2 [6 Sep 9-10am]) Peter Baker Annabel O'Neill (Items 1, 2 [6 Sep 9-10am, 7 Sep], 3 & 4) Aranza Bulnes-Beniscelli Benjamin Klug (Items 1.5-1.8, 3.1 [7 Sep 3.45-5pm], 3.2 & 4) Christina Fawns (Items 1, 2 [6 Sep 9-10am & 3-4.45pm, 7 Sep], 3 & 4) Clara Teniswood (Items 1.1-1.4, 2 [6 Sep 9-11am] & 3.2) Dominica O'Dea (Items 1, 2 [6 Sep 9-10am & 2.45-4.45pm, 7 Sep], 3 & 4) **Isabelle Francis** James Rae (Items 1.1-1.4 & 2 [6 Sep 9-11.30am]) Jason Smith Kelly-Anne Lawler (Items 1.1-1.4 & 2 [6 Sep 9am-12pm, 3.30-4.30pm]) Kelly Strike Mehdi Shabaninejad (Items 1.1-1.6, 2 & 3) Mio Kuhnen (Items 1, 2 [6 Sep 9-10am], 3.1 [7 Sep 2-3pm], 3.2, 3.3 & 4) Tim Hunt (Items 1.5-1.8, 2 [6 Sep 9.30am-4.45pm, 7 Sep], 3 & 4)

The meeting commenced at 9.00 am on Wednesday 6 October 2021.

1. Welcome and Introductions

The Chair welcomed members of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) to the meeting.

1.1 Acknowledgement of Country

The Chair acknowledged the traditional owners, past and present, on whose lands this meeting was held.

1.2 Disclosure of Interests

Before the meeting commenced, Committee members completed a Meeting Declaration of Interests.

No actual, potential or perceived conflicts of interest were recorded for this meeting.

1.3 Confirmation of Agenda

The Committee endorsed the agenda for Meeting 80.

1.4 Confirmation of Out-of-Session Decisions

The Committee noted that:

- advice on the Winchester South Project was provided to the regulator and published in accordance with agreed timeframes; and
- advice on Boggabri Coal Mine Modification 8 was provided to the regulator and published in accordance with agreed timeframes.

Leigh Creek Energy Stage 1 Commercial Development [please refer to Minutes Meeting 79].

1.5 Correspondence

The Committee noted the status of correspondence to 20 September 2021.

1.6 Action Items

Ongoing items were noted and an update was provided on the timing of completion.

1.7 Forward Planning Agenda

The Committee noted the forward planning agenda.

It was agreed that the next meeting be scheduled as a videoconference for 10-11 November 2021.

1.8 Environmental Scan

Committee members and secretariat reported back on developments in recent months, including:

- Professor Jenny Davis, Dr Andrew Boulton and Professor Rory Nathan had been reappointed as members of the IESC;
- the Geological and Bioregional Assessment Program website is now the responsibility of the Office of Water Science; and
- upcoming conferences and workshops.

2. Advice on Projects referred by governments

2.1 Tomingley Gold Extension Project

The Tomingley Gold Extension Project seeks to expand its current gold mine operations approximately 4 km south of the village of Tomingley, in central western NSW. The project includes both the existing mine, which comprises four open-cut pits with underground mines under three of the areas (Wyoming 1, Caloma 1 and Caloma 2), as well as an open-cut and underground mining extension to target the San Antonio and Roswell deposits. The existing operations are referred to as the Tomingley Gold Operations (TGO) and the extension as the San Antonio and Roswell deposits (SAR) mine. The project is expected to extend the mine life by seven years (from 2025 to 2032) and increase ore production from 1.5 million

tonnes per annum (Mtpa) to 1.75 Mtpa. The proposal also includes an expansion and upgrade of existing surface infrastructure, including relocating a section of the Newell Highway.

The project is at the Gateway stage under the NSW State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (the Mining SEPP) for approval, prior to lodging a development application and environmental impact statement. Consequently, the documentation provided focusses on potential Biophysical Strategic Agricultural Land (BSAL) and is supplemented with preliminary assessments of how the proposed activities may affect groundwater, surface water hydrology and water quality.

Key potential impacts from this project are:

- the loss of 207 ha of BSAL identified at the project site. This land would be directly cleared for the mine development;
- short- and long-term (legacy) effects arising from contamination of surface water and groundwater near Residue Storage Facilities (RSF) which is likely to contain saline and moderately alkaline water with elevated concentrations of, for example, ammonia, arsenic, copper, cyanide and nickel;
- post mining, final void water quality is predicted to gradually degrade over time due to ongoing
 evaporative loss from the voids, eventuating in saline water potentially contaminated with high
 concentrations of dissolved metals and other toxicants. Some migration and throughflow is likely
 to occur in the final voids, but poor-quality water is primarily expected by the proponent to
 remain constrained to the voids where they are likely to pose risks to bats and birds that can
 access the contaminated pit lakes; and
- changes to groundwater availability and quality in the perched alluvial aquifers associated with Gundong and Bulldog creeks caused by mining activities and alterations of topographic relief (e.g., road realignment). Altered alluvial groundwater availability and surface water-groundwater interactions may impact the condition and persistence of terrestrial and subterranean groundwater-dependent ecosystems (GDEs) associated with these creeks. These GDEs may include threatened ecological communities, as well as remnant riparian vegetation used transiently by species listed under the Environment Protection and Biodiversity Conservation Act 1999 Cth (EPBC Act) and the NSW Biodiversity Conservation Act 2016 (BC Act).

3. Other business

3.1 IESC Information Guidelines Review

The Information guidelines for proponents preparing coal seam gas and large coal mining development proposals outline what types of information a proposal for a CSG or large coal mining project should include. This information is needed to enable the IESC to provide robust scientific advice to government regulators on the potential water-related impacts of such proposals. The Committee discussed, and agreed to, revisions.

3.2 Presentation: Assessing the Risk of Metal Contaminants in Aquatic Systems

Committee member Dr Jenny Stauber gave a presentation on factors affecting metal bioavailability and toxicity in waters, ecotoxicology as a line of evidence in integrated risk assessment of metals, metals in sediments, and guideline derivation.

3.3 Ongoing Development and Use of Conceptual Models in the IESC Advice Process

The Committee discussed conceptual models based around models presented by Committee members.

4. Close of Meeting

The Chair thanked everyone for their contribution to the meeting.

The meeting closed at 5.30 pm on Thursday 7 October 2021.

Next Meeting

The next meeting is scheduled for 10 to 11 November 2021.

Minutes confirmed as true and correct: Dr Chris Pigram AM, FTSE IESC Chair 2 December 2022