**South Australia's submission to the Commonwealth House of Representatives Standing Committee on Agriculture, Resources, Fisheries and Forestry**

Environment Protection and Biodiversity Conservation Amendment (Mining, Petroleum and Water Resources) Bill 2011

## South Australia's regulation of mining activities

In South Australia, the environmental regulation of petroleum, geothermal energy and greenhouse gas storage exploration, development, production, processing and transport operations including the extraction of coal seam gas are covered by the *Petroleum and Geothermal Energy Act 2000.* A synopsis of the key requirements of this legislation is provided in Attachment A. Minerals exploration, mining and processing, including the mining of coal are covered by South Australia's *Mining Act 1971, and the* provisions for associated environmental regulations are included in Attachment B.

Further to this, the *Environment Protection Act 1993,* the *Natural Resources Management Act 2004* and the *Radiation Protection and Control Act 1982* provide additional regulation in South Australia for mining activities that trigger their involvement.

Petroleum, geothermal energy, greenhouse gas storage, and mining companies may, depending on the nature of the activity being undertaken, require a licence from the Environment Protection Authority (EPA) under Schedule 1 of the *Environment Protection Act 1993* for one or more of the following activities (Attachment C provides the full definitions of the relevant activities):

- Chemical Storage and Warehousing Facilities;
- Chemical Works;
- Coal Handling and Storage;
- Crushing, Grinding or Milling;
- Extractive Industries; and
- Fuel Burning.

The *Natural Resources Management Act 2004* has a number of controls on the use and management of water resources by mining.

- All wells drilled across the State require a permit from the Minister that sets out aquifer and water quality protection criteria.
- "Water-affecting activities" such as dams, levees, or excavating in a watercourse require a permit from the relevant authority. Policies in regional natural resource management plans set out the criteria for permits. When undertaking such activities, mining companies require a permit in addition to any other approvals.
- In areas of the State that are 'prescribed', petroleum and geothermal energy production and mining operations require a licence and an allocation to take water from a 'prescribed' resource, under policies set out in the relevant

water allocation plan. This includes mine de-watering, and water that is co-produced with petroleum (both oil and gas).

In addition, every person, business and industry has obligations under the *Environment Protection (Water Quality) Policy 2003*, which is legislatively underpinned by the *Environment Protection Act 1993*. This includes:

- avoiding discharging or depositing waste or listed pollutants into any waters, bores, and mine shafts or onto land where it might enter the water;
- not contravening the water quality criteria at the point of discharge, unless allowed for by the EPA; and
- not exceeding discharge limits.

The State Government also administers the *Radiation Protection and Control Act 1982*, which applies to mining and mineral processing operations which have the potential to produce significant occupational radiation exposures, or which generate wastes having the potential to cause a significant increase in the radiological exposure to people and the environment. Regulatory oversight of the operations captured within this legislation includes the management of impacts of radioactive materials upon the quality of water bodies.

**Recent policy and regulatory reviews relating to mining**

As the Committee would be aware, a process for the reform of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) in the context of the Council of Australian Governments' (COAG) environmental regulatory reform agenda is underway. In line with COAG's decision of 19 August 2011, a Working Group is preparing an interim report to COAG on options for key reform measures. This reform package is considering greater accreditation of assessment processes and the introduction of new national standards.

**Future policy developments being considered relating to mining**

Priority areas being considered in the water resources policy framework relevant to mining, petroleum, geothermal energy and greenhouse gas storage operations include further unbundling of water rights, water allocation and planning, how to manage activities that interfere with aquifers, identification of potential future water resources through the *Facilitating Long-term Outback Water Solutions Program*, and addressing Aboriginal cultural water needs. Changes are also being considered to *Environment Protection (Water Quality) Policy 2003*, which may have impacts on the mining industry.

**Practicalities of implementing such a Bill**

The South Australian Government does not support the proposals in the draft Bill, particularly ahead of COAG's environmental regulatory reform agenda which may result in more appropriate regulatory reform options and timeframes for dealing with this matter.

It is apparent that the Bill provides the Commonwealth with powers to be the consenting authority for mining and extractive industry actions that have, or are likely to have, a

significant impact on South Australia's current regulatory powers and natural resources (particularly water). It is unclear whether the State's environmental authorisation processes would operate in parallel with the new approval process required from the Commonwealth, however it is assumed that the new Commonwealth process would not negate the need for State's and Territories to also provide relevant consents.

The assessment and management of potential impacts on water resources from exploration or development of minerals, petroleum, geothermal energy and gas storage resources is a localised issue which is effectively assessed and regulated through State law:

- the EPBC Act already provides appropriate mechanisms for determining when a mining, petroleum, geothermal energy and greenhouse gas storage activity should be assessed by the Commonwealth, and is adequate in addressing Commonwealth matters;
- relevant South Australian legislation, as referred to above, are at the forefront of best practice regulatory frameworks which adopt triple bottom line assessment and risk management principles, and provide processes to adequately assess the issues that this draft Bill is aiming to regulate;
- the draft Bill would impose another layer of regulation and assessment, contrary to the recently established COAG Working Group on Environmental Regulation Reform. This would create unnecessary burdens on minerals, petroleum, geothermal energy and gas storage exploration, development and production enterprises by unnecessarily duplicating regulatory regimes, contradictory to COAG's commitment to the streamlining of regulation processes as recommended by Australia's Productivity Commission[1];
- the draft Bill does not support COAG's best practice regulatory principles as the objectives of the regulation appear to be anti-competitive due to the increased regulatory burden being targeted specifically at exploration, mining, upstream petroleum, geothermal energy and gas storage companies; and
- the draft Bill would result in a net negative impact on communities as the increased regulatory burden. This is due to an increase in red-tape and start up costs and the lag-time of approvals acting as a barrier for new mineral and energy resource developments. These factors would eventually impact on the supply of resources available to the community, higher building and energy costs for the consumer and a decrease in local employment.

In an attempt to reduce the parallel assessment process, the Bill provides for the Minister to accredit a State legislative process after the Commonwealth Parliament has been given the opportunity to oppose the accreditation. It is unclear what impact this may have on South Australia's regulators and whether environmental authorisation processes, particularly under the *Environment Protection Act 1993* and *Radiation Protection and Control Act 1982*, would receive accreditation from the Commonwealth. South Australia has had limited state process accredited under the EPBC Act and it would be likely that accreditation would involve significant costs to the State. Financial decisions in relation to any national partnership will need to consider these costs as well as direct impacts on water resources.

[1] Productivity Commission 2009, *Review of Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector*, Research Report, Melbourne.

The Bill has a retrospective commencement, commencing on the day after the Bill was introduced into the House of Representatives (13 September 2011). This has the potential to cause uncertainty with all key stakeholders that are currently undergoing regulatory assessment and could be regarded as a significant risk by mining and petroleum companies working in South Australia.

With regard to water resources, the major intent of the EPBC Act is to protect 'matters of national environmental significance'. The existing matters of national environmental significance (NES) are enabled through constitutional powers such as signing of international agreements, the Corporation powers and international trade. There is no specific head of power to legislate for a water related matter of NES. Additional matters of national environmental significance can be specified by regulation after consultation with the States.

Sections 51 and 100 of the Australian Constitution provide for the States to manage water resources with section 100 specifically precluding the Commonwealth from legislating in relation to rivers. Further legal advice on the validity of this trigger should be sought by the Committee.

The definition of a 'water resource' under Section 24F is very broad. Complications identified include;

- under Section 24F Part (b), the definition includes 'any recharge zone' which presumably means the recharge zones of aquifers. While this is sound hydrological concept, it may also create considerable management complexities. Recharge zones for some groundwater systems may be distant from where the groundwater is accessed. In extreme cases these will be in different jurisdictions, such as the Great Artesian Basin and Otway Basin; and
- Section 24F Part (b) also appears to capture artificial recharge or re-injection schemes by including a 'system for such a place'. South Australia seeks clarification about the intent of including such matters in the definition.

## ATTACHMENT A

### *Petroleum and Geothermal Energy Act 2000*

All exploration, development and production operations associated with upstream petroleum resources, including coal seam gas extraction, and geothermal energy resources and gas storage resources (for the storage of both greenhouse gases and hydrocarbon gases to buffer gas markets) are licensed and regulated under South Australia's *Petroleum and Geothermal Energy Act 2000* (P&GE Act) and the accompanying *Petroleum and Geothermal Energy Regulations 2000.*

Amongst the highest level objectives of the P&GE Act are objectives to:

- create an effective, efficient and flexible regulatory system;
- minimise environmental damage and protect the public from risks inherent in regulated activities; and
- establish and sustain appropriate consultation processes involving people directly affected by regulated activities and the public in general.

It is important to recognise that the definition of "environment" under the P&GE Act is broad and includes:

- land, air, water (including both surface and underground water), organisms and ecosystems;
- buildings, structures and cultural artefacts;
- productive capacity or potential;
- the external manifestations of social and economic life; and
- the amenity values of an area.

Activities regulated under the P&GE Act cannot be carried out unless there is an approved Statement of Environmental Objectives (SEO) in place, prepared on the basis of an Environmental Impact Report (EIR). The EIR is prepared by the proponent and identifies[2]:

- specific features of the environment that can reasonably be expected to be affected by the activities, with particular reference to the physical and biological aspects of the environment and existing land uses;
- reasonably foreseeable events associated with the activities that could pose a threat to the relevant environment and estimated frequency of these events;
- potential consequences of these events on the environment;
- actions proposed to be taken to manage or address potential consequences; and
- relevant owners of land and affected stakeholders.

[2] Refer to Part 3 of the Petroleum and Geothermal Energy Regulations 2000

The SEO sets out the environmental objectives to be achieved to address the risks identified in the EIR and specific criteria to be used (by both the proponent and Government) to assess the achievement of the objectives.

The P&GE Act requires an environmental significance assessment[3] to be undertaken on the basis of information provided in the EIR. This assessment classifies the level of environmental impact of the proposed activities, which is then referred to other State Government agencies as relevant for concurrence (including the Department of Environment and Natural Resources, the Environment Protection Authority and the Department of Planning, Transport and Infrastructure).

Once agreed, the environmental impact classification is used to determine the level of stakeholder consultation that the department will conduct on the EIR and SEO document. In all cases, consultation on the EIR and SEO is undertaken with other Government agencies (those mentioned above as well as the Department for Water). For activities classified as of medium environmental impact, the department also consults with directly affected landowners, relevant stakeholders and the general public.

All EIRs, SEOs and environmental significance assessments are publicly available documents[4].

Through the development of the EIR and SEO documents and consultation undertaken by both the proponent and the department, stakeholders (including other State Government agencies and landowners) are provided with opportunities to raise any issues of concern they may have with the proposed activities.

In addition to development of an EIR and SEO, P&GE Act licence holders are required to serve notice of entry to owners of land at least 21 days before their land is to be entered. Owners of land are also entitled to appropriate compensation from P&GE Act licence holders for any losses, deprivation or reasonable costs sustained during both the process of negotiating land access and for the full cycle (of time) for land access, right through to decommissioning.

Licensees are also required to submit annual reports detailing activities undertaken within each licence area during the respective licence year, as well as the activities proposed for the ensuing licence year. An important part of this reporting is to ensure that each licensee regularly reviews, assesses and reports on their performance and compliance with the P&GE Act and the relevant environmental objectives. These company annual reports are publicly available documents[5].

[3] Environmental significance assessment criteria available at: http://www.pir.sa.gov.au/__data/assets/pdf_file/0008/27728/sigactv6.pdf

[4] EIRs, SEOs and environmental significance assessments available at: http://www.pir.sa.gov.au/petroleum/environment/register/seo,_eir_and_esa_reports

[5] Annual reports available at: http://www.pir.sa.gov.au/petroleum/legislation/company_annual_reports

**ATTACHMENT B**

***Mining Act 1971***

All exploration and mining operations associated with mineral resources, including construction materials, metallic and non-metallic minerals are licensed and regulated under South Australia's *Mining Act 1971* (Mining Act) and the accompanying *Mining Regulations 2011.* The Mining Act and Regulations are administered by the Mineral and Energy Resources Division.

The objectives of the Mining Act are aligned to the department's policy framework for Best Practice Regulation: The department fundamental regulatory principles include:

- a fit for purpose regulatory approach which achieves clearly identifiable outcomes;
- the assignment of clear responsibility and accountability which is respectively understood by the explorer, miner and the community; and
- the enforcement of approved outcomes by the explorer and miner.

Valuing the informed involvement of communities and other stakeholders in process leading to decision making and achievement of a social licence to operate.

The Mining Act was recently amended to adopt COAG's principles for best-practice regulation making. The Act has moved from prescriptive regulation to performance based regulation which supports triple bottom line environmental assessment. The definition of "environment" under the Mining Act includes:

- land, air, water (including both surface and underground water and sea water), organisms, ecosystems, native fauna and other features or elements of the natural environment;
- buildings, structures and other forms of infrastructure and cultural artefacts;
- existing or permissible land use;
- public health, safety or amenity;
- the geological heritage values of an area; and
- the aesthetic or cultural value of an area.

In South Australia, before any licence or lease can be granted, the Government will undertake a rigorous environmental assessment. The proponent's proposal must set out:

- an assessment of the environmental impacts;
- the measures to manage, limit or remedy environmental impacts; and
- the criteria to be adopted to measure the expected environmental outcomes.

In conjunction with the above, the Government must undertake a statutory consultation process with key stakeholders. Key stakeholders for both licence and lease proposals include the Department for Environment and Natural Resources, which incorporates the divisions of Conservation, Water and Aboriginal Affairs and the general public. In the case of mining leases it is a statutory requirement that the landowner and the district council be directly consulted.

It is important to note that the above list of stakeholders is not exhaustive, as other government agencies or interest groups may be consulted depending on the nature and location of the proposed mining operation.

Once a licence or lease is granted exploration or mining cannot be carried out unless there is an approved Program for Environmental Protection and Rehabilitation (PEPR): The objective of a PEPR is to ensure:

- adequate information is provided about the proposed activities;
- impacts/risks to the environment are properly identified and managed to achieve the approved environmental outcomes; and
- land is properly rehabilitated.

The holder of any exploration or mining tenement cannot carry out any exploratory or mining operations unless the PEPR specifies the following information:

- the environmental outcomes that are expected to occur as a result of the mining operations (including after taking into account any rehabilitation proposed by the holder of the tenement and other steps to manage, limit or remedy any adverse environmental impacts;
- incorporates information about the ability of the tenement holder to achieve the environmental outcomes;
- includes information on any consultation undertaken in connection with the proposed operations, and addresses any concerns raised;
- set out the environmental outcomes for mine completion; and
- set out the strategies that will be adopted to comply with the environmental outcomes and the criteria that will be used to measure how the outcomes are being achieved.

In terms of landowner engagement, it is a statutory requirement under the Mining Act that a Notice of Entry must be served upon the landowner at least 21 days prior to entering the land to undertake any exploration or mining operations. The Notice of Entry must include information such as a reasonable description of the proposed activities; the location, timing and duration of activities; set out a process on how the explorer/miner shall keep the landowner informed of activities and a copy of Part 9 of the Mining Act which outlines rights of objection and compensation rights.

In conjunction with the above, it is important to note that under the Mining Act certain land in the state is exempt from mining. Exempt land includes cultivated fields, orchards, vineyards, land within 400m of a dwelling, and land within 150m of a spring, well, reservoir or dam.

Exploration or mining operations cannot be undertaken on exempt land unless the landowner (by agreement with the proponent) waives their right to exempt land.

The Mining Act includes the right for landowners to claim for compensation as a result of mining operations. The compensation may take into consideration:

- economic loss, hardship or inconvenience;
- any damage caused on the land;
- any loss of productivity or profits; and
- legal costs.

The Mining Act also includes a provision which gives the landowner the right to require acquisition of their land where a mining operation will substantially impair the landowners use and enjoyment of the land.

**ATTACHMENT C**

**Related mining activities under Schedule 1 of the Environment Protection Act 1993**

Chemical Storage and Warehousing Facilities

the storage or warehousing of chemicals or chemical products that are, or are to be, stored or kept in bulk or in containers having a capacity exceeding 200 litres at facilities with a total storage capacity exceeding 1 000 cubic metres.

Chemical Works

the conduct of—

(a) works with a total processing capacity exceeding 100 tonnes per year involving either or both of the following operations:

(i) manufacture (through chemical reaction) of any inorganic chemical, including sulphuric acid, inorganic fertilisers, soap, sodium silicate, lime or other calcium compound;

(ii) manufacture (through chemical reaction) or processing of any organic chemical or chemical product or petrochemical, including the separation of such materials into different products by distillation or other means; or

(b) works with a total processing capacity exceeding 5 000 tonnes per year involving operations for salt production.

Coal Handling and Storage

the handling of coal or carbonaceous material by any means or the storage of coal, coke or carbonaceous reject material at facilities with a total handling capacity exceeding 100 tonnes per day or a storage capacity exceeding 5 000 tonnes.

Crushing, Grinding or Milling

processing (by crushing, grinding, milling or separating into different sizes by sieving, air elutriation or in any other manner) of—

(a) chemicals or rubber at a rate in excess of 100 tonnes per year; or

(b) agricultural crop products at a rate in excess of 500 tonnes per year, but excluding non-commercial processing for on farm use; or

(c) rock, ores or minerals at a rate in excess of 1 000 tonnes per year, but excluding—

(i) processing on a mining lease area, or processing of material from a mining lease area on adjacent land subject to a miscellaneous purposes licence, under the Mining Act 1971; and

(ia) processing on the area of a private mine (within the meaning of section 19 of the Mining Act 1971), or processing of material from a private mine on adjacent land subject to a miscellaneous purposes licence under the Mining Act 1971; and

(ib) processing of sand, gravel, stone, shell, shale, clay or soil as authorised under any statute other than this Act or the Mining Act 1971; and

(ii) processing of wet sand.

Extractive Industries

the conduct of operations involving extraction, or extraction and processing (by crushing, grinding, milling or separating into different sizes by sieving, air elutriation or in any other manner), of sand, gravel, stone, shell, shale, clay or soil, being operations with an extraction production rate exceeding 100 000 tonnes per year.

Fuel Burning

the conduct of works or facilities involving the use of fuel burning equipment, including flaring (other than flaring at petroleum production, storage or processing works or facilities that do not have a total storage capacity or total production rate exceeding the levels respectively specified in clause 1(5)) or incineration, where the equipment alone or in aggregate is capable of burning combustible matter—

(a) at a rate of heat release exceeding 5 megawatts; or

(b) at a rate of heat release exceeding 500 kilowatts and the products of combustion are used—

(i) to stove enamel; or

(ii) to bake or dry any substance that on heating releases dust or air impurities.