

**Land and Resources Tribunal**

REGISTRY: Brisbane  
NUMBERS: AML 207/2006  
          ENO 208/2006  
TENURE IDENTIFIER: 4761-ASA 2

Applicant:           **XSRATA COAL QUEENSLAND PTY LTD AND OTHERS**  
                          **AND**  
Respondents:       **QUEENSLAND CONSERVATION COUNCIL INC,**  
                          **MACKAY CONSERVATION GROUP INC**  
                          **AND**  
Statutory Party:   **ENVIRONMENTAL PROTECTION AGENCY**

**FURTHER AND BETTER PARTICULARS**

Pursuant to the order of the Tribunal on 27 November 2006, the Queensland Conservation Council Inc provides the following further and better particulars:

1. The conditions the Queensland Conservation Council Inc (QCC) seeks to have imposed pursuant to grounds 1 to 6 of the objection are:
  - (a) That the applicant avoid, reduce or offset the likely greenhouse gas emissions from the mining, transport and use of the coal from the mine of an amount totaling the current maximum estimated production of greenhouse gas emissions of 96.44 million tonnes of carbon dioxide equivalent (MtCO<sub>2</sub>-e).
  - (b) That annually from the date the mining lease is granted until the end of the use of coal from the mine, the applicant file a report that is not false or misleading setting out how condition 1(a) has been complied with by:
    - (i) serving a copy of the report on the Environmental Protection Agency; and
    - (ii) posting a copy of the report on a publicly available page of the applicant's website at <http://www.xstrata.com>.
2. The significance of the contribution of the mine to global warming and climate change, as referred to in paragraph E of the facts and circumstances relied upon in support of the grounds of objection are:
  - (a) Increasing the amount of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases in the atmosphere leads to increased global warming and climate change.

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FURTHER AND BETTER  
PARTICULARS  
Filed on behalf of Queensland  
Conservation Council Inc

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- (b) The greenhouse gas emissions from the full fuel cycle of the mining, transport and use of the 28.5 million tonnes (Mt) of coal from the mine for electricity production or steel production will be approximately 72.18 – 96.44 MtCO<sub>2-e</sub>, based on the methodology of the Australian Greenhouse Office, explained below.
- (c) The total annual greenhouse gas emissions produced directly by Australia are currently approximately 550 MtCO<sub>2-e</sub>, which is approximately 1.4% of greenhouse gas emissions globally.
3. The calculation of emissions of 72.26 to 96.44 MtCO<sub>2-e</sub> in paragraph C of the facts and circumstances set in the notice of objection is:
- (a) Based upon the methodology provided in the Australian Greenhouse Office, *Australian Greenhouse Office Factors and Methods Workbook*, (Australian Greenhouse Office, Canberra, 2004) (the AGO workbook).
- (b) Based on the formula provided in the AGO workbook:
- $$\text{Greenhouse Gas Emissions (GHG) (t CO}_2\text{-e)} = Q \times \text{EC} \times \text{EF}/1000$$
- Where: Q = the quantity of fuel burnt in tonnes; EC = the energy content of fuel in GJ/tonne or GJ/kL; EF = the relevant emissions factor.
- (c) Based on assumptions that the coal is washed and used either for electricity generation or in the steel industry.
- (d) Based on the figures provided in Table 1, page 6 of the AGO workbook:
- (i) The energy content (EC) of washed black coal for Queensland electricity generation is 27.0 GJ/t and the full fuel cycle emissions factor (EF) is 93.9 kg CO<sub>2-e</sub>/GJ.
- (ii) The energy content (EC) of coal used in the steel industry is 30.0 GJ/t and the full fuel cycle emissions factor (EF) is 112.8 kg CO<sub>2-e</sub>/GJ.

**Note:** A later version of the AGO Workbook is now available: Australian Greenhouse Office, *Australian Greenhouse Office Factors and Methods Workbook*, (Australian Greenhouse Office, Canberra, 2005) and the 2004 version of the AGO Workbook cannot be obtained from the AGO website (at <http://www.greenhouse.gov.au/>) and cannot be verified. The 2005 version of the AGO Workbook provides the same formula and figures as the 2004 version except that the full fuel cycle emissions factor for washed black coal for Queensland electricity generation is 93.8 kg CO<sub>2-e</sub>/GJ. Using the 2005 version of the AGO Workbook, the range of the greenhouse gas emissions from the full fuel cycle of the mining, transport and use of the 28.5 Mt of coal from the mine for electricity production or steel production will be approximately 72.18 – 96.44 MtCO<sub>2-e</sub>.

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 Anita O'Hart  
 Solicitor for QCC  
 11 December 2006