

## Steve O'Donoghue

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**From:** Craig Dalton <Craig.Dalton@hnehealth.nsw.gov.au>  
**Sent:** Monday, 29 May 2017 11:14 AM  
**To:** Steve O'Donoghue  
**Cc:** Peter Falkiner  
**Subject:** FW: Narrabri Gas Project (SSD 6456)

Dear Stephen,

Please find below the Health response to SSD 6456, Narrabri Gas Project.

I refer to the Environmental Impact Statement for the proposed development of a gas production field by Santos NSW (Eastern) Pty Ltd at Leewood, 20km southwest of Narrabri, New South Wales (NSW). The proposed development seeks to develop and operate a gas field requiring the installation of 850 wells, gas and water gathering systems and supporting infrastructure in the Pilliga area.

Hunter New England Population Health reviewed the Director General's Requirements' supporting documentation in September 2016 and recommended that the proponents should assess risks associated with human exposure to noise, air pollution and contamination of ground and surface water. The following is an assessment of the subsequent EIS in regard to these issues. Based on the nature and scale of the operation and distance from townships we expect there will be minimal impact on human health, however, we request further clarification on air quality assessments as described below.

### Air Quality Impacts

The EIS states that assessment criteria for all key pollutants will be met outside the boundary but the assessments are not shown. Air concentration contours are shown only for short term NO<sub>2</sub> and a graph displays concentration/distance for short term PM<sub>10</sub>. It will be important to show modelled contours of the air pollutants in relation to receptors (as is usually done for mine sites). Air concentration contours for annual PM<sub>2.5</sub> will be of particular interest to those concerned about health. Predicted concentrations of air toxics at receptors will also be of interest.

The relevant section of the EIS that makes reference to the other emissions assessed but for which the data is not displayed is shown below:

"the assessment focused on emissions of nitrogen dioxide, carbon monoxide, particulate matter (PM<sub>10</sub>/PM<sub>2.5</sub>), ozone as well as acrolein, formaldehyde and acetaldehyde (volatile organic compounds) and polycyclic aromatic hydrocarbons (PAHs) associated with the operation of the Leewood gas processing and power generation facility..... **The assessment found that the facility was predicted to meet all relevant impact assessment criteria outside the boundary as required.**" (page 34 HRA)

We understand EPA also requires clarification of aspects of the air quality assessment and we will await their review of this data before we can comment on the health risk assessment.

### Air Monitoring Before and After Commissioning

Consideration should be given to air monitoring near receptors before and after commissioning to provide confidence for the community and agencies that air modelling was accurate and minimal exposure is occurring. Proactive, independently validated, air monitoring may pre-empt community concern and could provide useful information for other proposed developments in NSW.

We note criteria used for annual PM<sub>10</sub> was the superseded level of 30 µg/m<sup>3</sup> not the new level of 25 µg/m<sup>3</sup>.

**Water & Managing Offsite Impact.**

The EIS indicates that there are no plans to use hydraulic fracture stimulation in the project area. The EIS documentation indicates that Santos has implemented a groundwater monitoring program to establish baseline data, confirm modelling assumptions and to monitor for any impacts from the proposed development.

Groundwater monitoring contained in the Water Monitoring Plan will measure the effectiveness of the ground water management strategies and track of scale of potential impacts to groundwater.

The significance for potential adverse human health impacts from surface water contamination from the project is considered to be very low provided spills, irrigation and dust suppression management is consistent with the proposed management plans.

**Noise**

We understand EPA has undertaken a comprehensive review of the noise assessments and we defer to their review.

Yours sincerely

David Durrheim

Professor David Durrheim  
DrPH, MPH&TM, MBChB, FACTM, FAFPHM  
Director Health Protection- Population Health  
and Conjoint Professor of Public Health Medicine, University of Newcastle  
Locked Bag 10, Wallsend NSW, AUSTRALIA, 2287

Tel 02 4924 6395 | Fax 02 4924 6215 |  
[David.Durrheim@newcastle.edu.au](mailto:David.Durrheim@newcastle.edu.au)

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