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Executive Officer
Economic Development and Infrastructure Committee
Parliament House, Spring Street
EAST MELBOURNE VIC 3002

**Re: Inquiry into Greenfields Mineral Exploration and Project
Development in Victoria**

Dear Sir/Madam,

We are making this submission after being informed of the inquiry by a community member. We respectfully request you receive the submission and believe that Environment Victoria, on our behalf, negotiated an extension of the submission date to today.

The following three pages forms the submission we are making to the Inquiry.

Yours faithfully,

David Minifie
Secretary
Ovens Landcare Network

The Ovens Landcare Network, an umbrella organization representative of approximately 22 Landcare Groups in the Ovens and King Valleys in North East Victoria, thanks the Economic Development and Infrastructure Committee for the opportunity to make a submission to the Inquiry into Greenfields Mineral Exploration and Project Development in Victoria.

Our knowledge base for comment is founded upon community experience and resulting concerns following the Applications for Exploration Licenses, Nos. 5250, 5251 & 5252 by Greenpower Natural Gas P/L in February 2010.

Our submission is primarily targeted toward the regulatory environment.

The existing requirement of notification of advice of application for exploration license via Public Notices being placed in one local paper and one State circulated paper is inappropriate. Not all farmers/landholders buy local papers, and it is an unreasonable requirement that whole of community should purchase and peruse every copy of their local paper on the off chance that an exploration license has been applied for.

Neither is the proposal (as made by DPI at the OLN information session held in Wangaratta in November 2010) that the Department of Primary Industry website should be visited constantly to check for applications which may impact landholders.

The Ovens Landcare Network suggest that printed notices should be prominently displayed in local stores and Australia Post Post Offices and that copies of these notices should be required to be circulated by rural mail contractors to each and every landholder in the area covered by the exploration license application area.

It became apparent through enquiries made during the time frame allocated for objections to the grant of the above licenses that the purpose of exploration was to determine potential for development Coal Seam Gas.

This was not initially evident through the Public Notice process and required significant communication and representations for clarification by individual local community members, and in addition requiring representations being made through the Federal Member and local government to actually identify true nature of the application.

Clearly the minerals/energy source of interest would affect concerns / issues as to what may be involved in exploration.

An accurate description of minerals/energy sources sought for exploration together with information as to the exploration process on ground should be specified in the Public Notice.

The existing regulatory framework and supervision is not adequate to effectively manage currently evolving exploration techniques. Recent experiences in both Queensland and New South Wales have demonstrated the capacity for evolving extraction imperatives and technologies to overwhelm the capability of Regulators.

Victorian Mineral and Petroleum resource regulation has evolved over a long period of time, in particular from the mid 19th century when enormous wealth was generated, with relatively

little effort, from gold. With little mechanization, and a small population, the hazards and environmental degradation were easily overlooked.

Specific to Coal Seam Gas, methane which was once a by product of coal mining is now recoverable and marketable. In addition, the site covered by the exploration process above ground appears small, the area impacted below ground has potential to be vast.

Like surgery, mining has evolved from open cut to keyhole, but whereas surgeons are still able to see and control exactly what happens, the same cannot be said of mining where bores can be many hundreds of meters deep, and what happens at the bottom of that hole is as much by chance as control.

Gas and water at extreme depth and pressures will follow the dictates of fluid dynamics, physics and chemistry, which are not fully understood, thus making management highly challenging.

The techniques currently employed to harvest gas include:

- a. Drilling bores or wells to many hundreds of meters depth, with the potential to create artificial connections between aquifers at varying depths. This may result in the draining or contamination of near surface freshwater sources
- b. ‘Fracking’ or fracturing of the coal mass by injection of water mixed with sand and a ‘secret’ cocktail of chemical additives many of which are carcinogens, endocrine disruptors, and other substances which you would not want in your food or water. The fracking process is like breaking an egg in that you know the shell will break but cannot predict the exact alignment of the fractures. The coal voids produced in this way intersect other natural faults and seams such that the fracking mixture will interact with and enter groundwater. In addition the fracking fluid also contaminates the water which is pumped out to release the gas, this contaminated water has to be contained and disposed.
- c. After fracking, water is pumped from the well allowing the gas to track through the fractured coal and rise up the well. This water will contain fracking fluid, is usually saline and coming from deep aquifers often contains a variety hydrocarbons and heavy metals not found in surface water. The dewatered voids have potential to fill with water from near surface aquifers, reducing the capacity of domestic and irrigation supply. This impact may be experienced for many kilometers from the drilling site.
- d. Liberated gas is then free to move through the fractures and up the well structure. But it is also free to move anywhere else that the dewatered fractures allow, including up the annulus, (the space surrounding the well casing) or into other natural or fraced voids. The most visible of the methane gas is that which finds its passage through aquifers and is seen venting from water bores, wells and springs. This gas will also slowly percolate into the plant root zone, disturbing soil biota and retarding plant growth.

The four processes described would all apply to a test well operated under an exploration license, the environmental and economic hazards are clear yet they cannot be managed by current regulation, inspection, or monitoring as the processes are hidden, and uncontrollable.

The Ovens Landcare Network proposes a moratorium on exploration for Coal Seam Gas in the State of Victoria.

The Ovens Landcare Network would strongly encourage the Economic Development and Infrastructure Committee to review the findings of the Federal Senate Rural Affairs and Transport References Committee's "Inquiry into management of the Murray Darling Basin – impact of mining coal seam gas".

As part of their inquiry into management of the Murray Darling Basin, they are examining the impact of mining coal seam gas on the management of the basin, including

The economic, social and environmental impacts of mining coal seam gas on:

- the sustainability of water aquifers and future water licensing arrangements;
- the property rights and values of landholders;
- the sustainability of prime agricultural land and Australia's food task;
- the social and economic benefits or otherwise for regional towns and the effective management of relationships between mining and other interests; and
- other related matters including health impacts.

This evidence based inquiry may well assist in determining the need for the State of Victoria to make appropriate changes to regulation and legislation to address the threats posed by this emerging energy source.

Specific to the State of Victoria is the fact the state is widely acknowledged to be the most fire prone area globally.

In recent times significant uncontrolled fires burnt through the State on both private and public land in 2003, 2006, 2007, and 2009.

As previously stated the fracking process is not an exact, scientifically controlled process as the activity occurs underground at the depth of the coal seam. This results in an imprecise fracturing outcome. There are many documented instances of methane mobilized by the fracking process and un-captured by the primary well head but moving freely through aquifers and emerging through bores, wells etc. Being highly flammable, ignition could and does result. In what ways does current legislation address the above additional risks posed on Catastrophic and Very High Fire Danger days, and how do the Economic Development and Infrastructure Committee members feel additional consideration to legislation could assist in minimising these?