



Queensland

# Environmental Protection Amendment Regulation (No. 3) 2011

**Explanatory Notes for SL 2011 No. 145**

made under the

*Environmental Protection Act 1994*

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## General outline

### Short title

*Environmental Protection Amendment Regulation (No. 3) 2011*

### Authorising law

Section 312W of the *Environmental Protection Act 1994*

### Policy objectives and the reasons for them

The objective of the Regulation is to:

- minimise the potential risks to groundwater from hydraulic fracturing (and other stimulation techniques) in Queensland.
- prohibit the deliberate addition of BTEX (benzene, toluene, ethylbenzene and xylene) chemicals in stimulation fluid used by petroleum and gas activities.
- provide a measurable and enforceable standard based on human and ecosystem health;

- ensure a uniform regulatory environment across the entire industry (i.e. existing and new operators).

### **Achievement of policy objectives**

The *Natural Resources and Other Legislation Amendment Act (No.2) 2010* amended the *Environmental Protection Act 1994* to insert a new section that introduces a new statutory condition on all existing and new Chapter 5A environmental authorities (including coal-seam gas, conventional oil and gas, greenhouse gas storage and geothermal energy operations).

The condition prohibits the use of BTEX chemicals in a restricted stimulation fluid above a maximum amount prescribed by regulation. Restricted stimulation fluids are used as part of stimulation activities (including hydraulic fracturing) which are engineering techniques used in the oil and gas industry to increase the flow rates of gas to the surface. Stimulation fluids typically consist of water, sand and other chemicals which are pumped down a gas well at a very high pressure, with the intent of 'fracturing' the coal seam and bringing gas to the surface.

This provision achieves the policy objectives by adopting a science-based, credible and publicly accessible standard that is designed to protect human and ecosystem health. The standard is an additional safeguard in the regulatory framework for hydraulic fracturing and adopts a conservative standard to the final fluid mix which will be pumped down the well and then diluted in the receiving environment.

The application of the standard to the chemical additives will then isolate the amount of BTEX that is introduced to the environment from stimulation fluids versus the amount of BTEX that might already be occurring naturally in water used as an ingredient in the fluid and/or underground.

### **Consistency with policy objectives of authorising law**

The amendment regulation is consistent with the main objects of the *Environmental Protection Act 1994*, that is, to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (*ecologically sustainable development*).

### **Inconsistency with policy objectives of other legislation**

The regulation is consistent with the policy objectives of other legislation. It provides for ecologically sustainable development, consistent with other State laws relating to impacts on the environment from development.

### **Benefits and costs of implementation**

Implementation will be done within current departmental budgets. The CSG industry has advised that it does not intentionally add BTEX to stimulation fluid used for the purposes of hydraulic fracturing and therefore, there will be limited cost on industry associated with this amendment. Some petroleum and gas operators (i.e. non coal-seam gas operations) may take some time to transition to compliance with the proposed standard and the Government will work with these operators on a case-by-case basis. Another cost will be any new monitoring and testing conditions that will be required to demonstrate compliance with the standard.

### **Consistency with fundamental legislative principles**

Section 24(1)(i) of the *Legislative Standards Act 1992* was considered during the drafting of this regulation and this regulation is consistent with fundamental legislative principles.

### **Consultation**

Consultation was undertaken on the proposed standard with the Australian Petroleum Production and Exploration Association (APPEA), Queensland Resources Council, individual companies undertaking greenhouse gas storage exploration, the Australian Geothermal Energy Association, individual companies providing hydraulic fracturing services to industry and laboratories.

### **Reasons for non-inclusion of information**

This explanatory note includes all of the information required by section 24(4) of the *Legislative Standards Act 1992*.

## Notes on provisions

*Clause 1* of the Amendment Regulation states the short title.

*Clause 2* of the Amendment Regulation states that the Amendment Regulation amends the Regulation.

*Clause 3* of the Amendment Regulation prescribes the maximum amount of BTEX chemicals in the restricted stimulation fluid. In order to protect human and ecosystem health, the standard adopts a precautionary measure in line with the Australian Drinking Water Guideline for benzene and the Australian and New Zealand Environment Conservation Council guideline for marine and freshwater quality for toluene, ethylbenzene and xylene. Whilst the standards typically apply to ambient waters, they were chosen on the basis that they are science-based, publicly available and because no standards exist in other jurisdictions that apply specifically to the use of BTEX in stimulation fluids. This is a conservative option which will minimise the risk of contamination in the event of connectivity with a groundwater aquifer. This clause also prescribes a standard for chemicals that produce, or are likely to produce BTEX as they break down in the environment.

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### ENDNOTES

- 1 Laid before the Legislative Assembly on . . .
- 2 The administering agency is the Department of Environment and Resource Management.

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