

# Evidence

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## An Environmental Risk Assessment for coal bed methane, coal mine methane and abandoned mine methane operations in England

Project summary SC130029

The report presents the findings of an assessment of the environmental risks associated with the production of natural gas in three different processes to recover methane from coal seams. The assessment covers:

- coal bed methane – the recovery of natural gas from unmined coal seams
- coal mine methane – the recovery of methane from active mines, either before coal extraction or, more commonly in the UK, from the disturbed strata immediately following coal extraction
- abandoned mine methane – the removal of methane after coaling operations have ceased and the mine has closed

The study has provided a national overview of the environmental risks and risk management controls the Environment Agency and other regulators can use to reduce environmental impacts.

The risk assessment looked at the lifecycle of gas production through the different phases of exploration, appraisal, operation and abandonment. It used the source–pathway–receptor methodology set out in Defra guidelines. The approach used was:

- identification of hazards
- identification of consequences
- estimation of probability of the hazards occurring
- estimation of the magnitude of the unmitigated risk
- identification of risk management options
- estimation of the residual risk after the use of regulatory controls

The report sets out the Environment Agency's understanding of the environmental risks from coal methane recovery in England. Its contents support the Environment Agency's technical guidance for onshore oil and gas operations in England and will inform decision making on coal methane recovery.

Overall, the study found that the regulatory controls currently available to the Environment Agency and other regulators can reduce the remaining risk posed by environmental hazards. This will be supported by monitoring and compliance work at each site where methane recovery takes place.

This summary relates to information from project SC130029, reported in detail in the following output:

**Report:** SC130029

**Title:** An Environmental Risk Assessment for coal bed methane, coal mine methane and abandoned mine methane operations in England

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**Internal Status:** Released to all regions

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