

Protocol for managing uncontrolled gas emissions from legacy boreholes

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Foreword

The core value of Queensland's resource industry is safety. Zero harm is the goal which drives how industry approaches every job. Each task is governed by a formal safety management system to ensure risks are identified and managed.

When an incident was identified in August 2012, the question was not *whether* industry would help; but *how* to coordinate each company's contribution under their different safety management systems. The Inspectorate played a central role in directing this process of handing over responsibility between companies. While the risks were always very low, safety remained the paramount focus of all those involved.

The outcome was a result of an unprecedented level of teamwork and goodwill—from companies, surrounding landholders, and the safety experts from the Department of Natural Resources and Mines.

This protocol is an attempt to capture the lessons from that success. It aims to describe what worked well, so that any future incidents can also be dealt with swiftly and safely.

The protocol reflects detailed discussions of a small working group of members of the three peak resource associations in Queensland – the Association of Mining and Exploration Companies (AMEC), the Australian Petroleum Production and Exploration Association (APPEA) and the Queensland Resources Council (QRC). All three associations were pleased with the opportunity to work closely with the Department of Natural Resources and Mines to develop this protocol.

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Objective and purpose

This protocol provides a means for the safe and efficient management, control and extinguishment of a legacy borehole fire or a legacy borehole (as defined below) identified as emitting methane at levels or in a manner that presents an unacceptable level of risk (**‘uncontrolled borehole incident’**) in Queensland.

This protocol provides a set of steps for the Queensland Government and industry to follow in the event that an uncontrolled borehole incident is identified. These steps have been designed to ensure a timely effective and safe outcome.

Background

On 18 August 2012 a small bush fire near the Kogan-Dalby Road was attended and extinguished by the Queensland Fire and Rescue Authority.

Whilst the initial bush fire was extinguished promptly, a legacy (coal exploration) borehole emitting coal seam gas continued to burn with a small flame. The Petroleum and Gas, and Mines Inspectorates within the Department of Natural Resources and Mines (DNRM) along with overlapping and adjoining coal and petroleum authority holders and their contractors collaborated to safely extinguish the shallow flame and cap the borehole.

This incident was an unprecedented event and the successful incident response achieved in August 2012 set a new benchmark for a coordinated approach on safety responses in Queensland. While it may not reoccur in the future, industry and Government have worked together to document the lessons learnt from this successful collaboration. If such an event was to reoccur the steps set out in this protocol can be followed.

Terminology

Activity: A specific task that forms part of the overall approach to restoring control of the borehole.

Company: A resource organisation, business or company identified by DNRM as potentially able to provide assistance in the event of an uncontrolled borehole incident.

DNRM: Department of Natural Resources and Mines. As lead agency for managing the state’s resources, DNRM is responsible for mine site safety and health issues and encouraging the development of a globally competitive mining and petroleum industry.

Legacy borehole: A borehole or well drilled for the purposes of coal, mineral or petroleum exploration or production but not by the current petroleum or mining tenement holder or its related bodies corporate, and where the land has since been relinquished or there is no continuity of tenure to the current tenure.

Party: All members of the public, industry, government or other relevant landholders or stakeholders identified by DNRM and other respondents involved or impacted in the incident response.

Petroleum and Gas, and Mines Inspectorates: The Petroleum and Gas Inspectorate and the Mines Inspectorate are responsible for the safety regulation of relevant resource industries and enforce compliance under the *Petroleum and Gas (Production and Safety) Act 2004*, *Coal Mines Safety and Health Act 1999* and *Mining and Quarry Safety and Health Act 1999*.

SHMS: Safety and Health Management System administered in accordance with relevant mining or petroleum and gas safety and health legislation.

Sign in/sign off process: A safety and health process put in place at the incident site whereby a company undertaking an activity ‘signs on’ to a record sheet overseen by DNRM. Whilst ‘signed on’ that company has control of the site and the SHMS of that company will be the single and only applicable SHMS on site. When the activity is completed the company will ‘sign off’, handing control of the site back to the DNRM until the next company ‘signs on’.

Uncontrolled borehole incident: a fire at a legacy borehole or a legacy borehole identified as emitting methane at levels or in a manner that presents an unacceptable level of risk.

Application

The immediate and safe control and management of an uncontrolled borehole incident will, in certain circumstances, require the work and cooperation of private land holders, government along with resource and drilling companies with the relevant skills and capacity to respond.

As a consequence, the required activities may be undertaken under different Safety and Health Management Systems (SHMS) and different tenure situations administered under a variety of legislation. This protocol provides a means for industry assistance, where necessary under Government oversight, to manage an uncontrolled borehole incident to achieve a safe and effective outcome.

This protocol will apply in circumstances where:

- 1) the identified borehole is a legacy borehole, and
- 2) the State Government exercises its discretion to take an oversight role and apply this protocol, for instances in circumstances where the fire is located on public land, or where a relevant tenure holder or private land owner requests or agrees that the State Government exercise their discretion to take an oversight role e.g. where there is a complexity of tenures arrangements, land access and/or the need for a variety of public, private and/or government entities to assist with an incident response, or
- 3) a company acts decides to act on its own initiative in regard to the legacy borehole incident, on its own tenure. In this case the simplified alternative pathway in Appendix A would be followed and standard incident notification procedures would be followed.

Principles

The protocol is based around the following principles:

1. Holders of resource tenure, drilling companies, contractors and the Queensland Government will use best endeavours to provide a co-operative, timely and effective emergency response for dealing with an identified uncontrolled borehole incident at a legacy borehole.
2. Where required the Queensland Government will utilise appropriate legislative powers applicable to the situation that arises to authorise or direct parties to rectify an uncontrolled borehole incident.

Indemnity

To ensure a timely response, the Queensland Government will use its powers to act as lead in managing an uncontrolled borehole incident with third party assistance brought in where necessary. Where able to do so under legislation this will include authorising parties to access legacy boreholes and in some cases directing parties to take action. For instance, this may include but would not be limited to requesting the use of expertise, machinery, and equipment of nearby resource companies and landholders.

Where the Queensland Government requests a party to undertake work in accordance with this protocol, the Queensland Government agrees to indemnify and hold harmless any party who is authorised to carry out such work under the protocol from any and all claims, demands, losses, causes of action, damage, lawsuits, judgments, including legal fees and costs, to the extent caused by, arising out of, or relating to the work of that party, except to the extent that such claims arise out of the party's negligence or wrongdoing.

Protocol steps

The steps to follow in the event of an uncontrolled borehole incident in Queensland are set out in Appendix A. The right hand side of the flow chart provides an alternative means where the company elects to act on its own initiative on its own tenure.

Note: Nothing in Appendix A prevents any person, whether a member of the public, industry or government official from undertaking any action, such as securing a site, as necessary to respond to an immediate threat to life or property.

Communication and media liaison

Initial reporting

A potential borehole incident could come to the attention of any of a number of parties such as the landholder, the current tenure holder, or government. If a tenure holder becomes aware of an uncontrolled borehole incident, they should:

- Ascertain as many details of the uncontrolled borehole incident as soon as possible including the borehole location, the state of the bore hole and the land and tenure details.
- Report to government authorities as per legislative requirements (use the Petroleum and Gas 24/7 emergency contact numbers) and follow any other notification procedures required by regulations or licence conditions.

Liaison and engagement with community and interested parties

To ensure the local community is fully informed the DNRM CSG Compliance Unit will utilise its expertise and local knowledge to take a lead role on liaison and engagement with the community, industry and directly affected stakeholders.

This may involve liaison with the GasFields Commission Queensland, adjacent landholders, local councils, industry, Queensland Fire and Rescue Services and the Queensland Police Force and other relevant government agencies.

The CSG Compliance Unit will also be responsible for informing key stakeholders about project delivery and completion once the project or safety issue has been resolved.

Media liaison

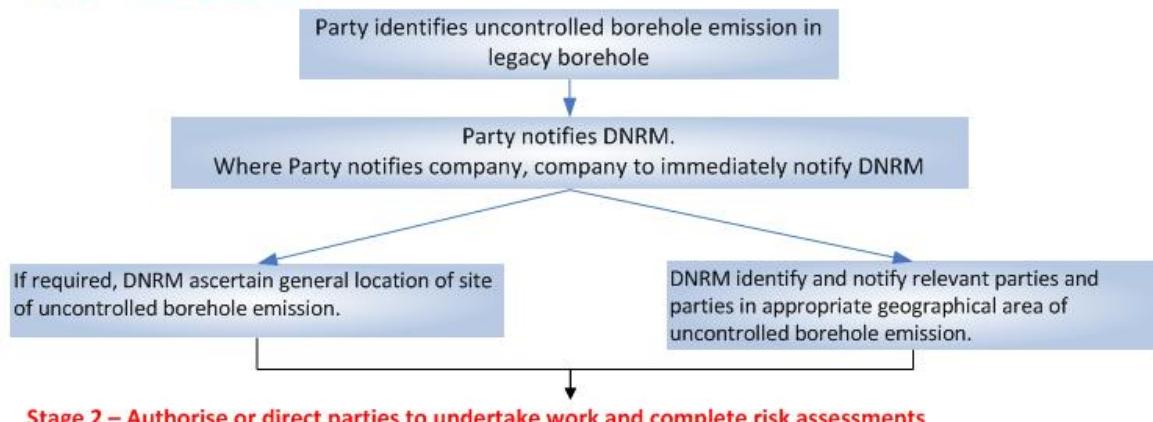
The DNRM media unit will coordinate communication and media engagement and appropriately inform the community with information as required. All parties will ensure that the media unit is regularly updated so that information released to the public is accurate and timely.

Media issues or enquiries should be referred to the DNRM media unit as soon as possible on media@dnrm.qld.gov.au. An email and follow-up phone call should contain all relevant information about the enquiry, deadlines and phone and email contact details of the media representative.

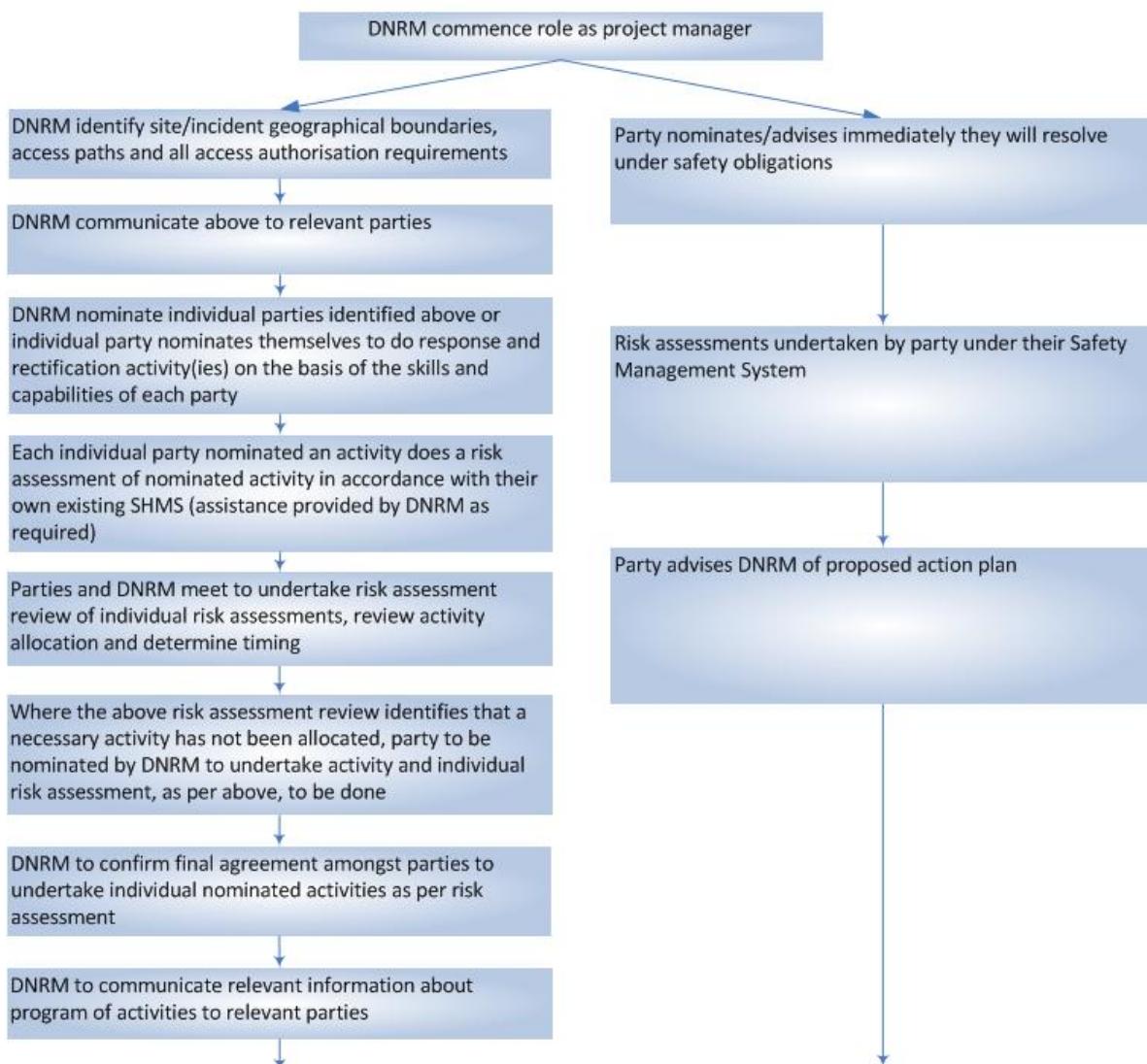
Appendix A - Overview of incident response process

APPENDIX A

Stage 1 – Identify and notify



Stage 2 – Authorise or direct parties to undertake work and complete risk assessments



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Stage 3 – Activities undertaken

The party nominated to do the first activity, signs off in accordance with the above process and commences work under their SHMS and any task specific risk assessments

On completion of activity the party signs off in accordance with the above process

The party allocated to do the second, third and any subsequent activities repeat the above two steps until all nominated activities are completed

Party undertakes rectification and rehabilitation work.

Stage 4 - Completion

DNRM review site and confirm legacy borehole abandoned to acceptable standard and all necessary activities have been done

DNRM release site and provide any relevant information to parties

Parties and DNRM attend debrief meeting to review process and outcomes