Queensland

Petroleum and Gas (Production and Safety) Regulation 2004

Explanatory Notes for SL 2004 No. 309

made under the

Coal Mining Safety and Health Act 1999
Mineral Resources Act 1989
Petroleum and Gas (Production and Safety) Act 2004

General Outline

Short title

Petroleum and Gas (Production and Safety) Regulation 2004.

Authorising law

Coal Mining Safety and Health Act 1999

Mineral Resources Act 1989

Petroleum and Gas (Production and Safety) Act 2004.

Objective of the legislation

To provide an effective and efficient regulatory system for the petroleum and pipeline industries in Queensland and address safety and technical issues related to production, transportation and use of petroleum, coal seam gas and fuel gas.

Reasons for the subordinate legislation

The Regulations are required to support the policy objectives of the *Petroleum and Gas (Production and Safety) Act 2004* and the *Petroleum Act 1923* as amended by the *Petroleum and Other Legislation Amendment Act 2004*. The Regulations provide detailed requirements for safety and technical matters, and other matters such as reports and information, notices, records and samples, fees, rents and royalties, decommissioning of pipelines, plugging and abandoning wells, filling of shot holes, and the establishment of the petroleum register.

The details provided for in the Regulations ensure that there is an adequate level of information being supplied in relation to applications and with respect to the results of authorised activities. The required application information is the minimum needed to enable the State to make an informed decision to grant or refuse the application. The information allows the State to better manage the granting of exploration and production tenure to optimise the benefit of these resources to the community. Provisions relating to the results of authorised activities are needed for both compliance monitoring and as a means of determining the possibility of any liability in relation to authorised activities becoming the responsibility of the State.

The safety requirements are intended to provide the key elements in relation to operating plants and the contents of safety management plans. The intention of the Regulation is to form the basis upon which the safety management plan can be compiled. This will ensure that the safety management plan is relevant to the particular risks associated with each operating plant.

The specific safety provisions in relation to coal seam gas are needed to ensure that key elements relating to the future safe and efficient mining of coal are addressed. These elements specifically address issues such as the use of steel in petroleum wells, and in the abandonment of wells. The intention of these provisions is to reduce the potential hazards to the future safe and efficient mining of the coal and to accurately identify and record any hazards that are created. Without these specific provisions, there would be greater possibility for the sterilisation of the State's coal resources or the creation of unacceptable levels of risk to future coal mining operations.

Pipelines are required to be regularly inspected and to be decommissioned in accordance with the recognised Australian Standard with additional requirements for strategic pipelines. The adoption of a recognised standard ensures uniformity of procedures, especially in relation to pipelines that transport petroleum or natural gas interstate. The additional requirements reflect the importance of strategic gas pipelines to the State economy and to the community.

The provisions in association with the distribution of fuel gas are intended to impose a best practice safety regime for the distribution and use of fuel gas. The regime specifically addresses the use of containers (cylinders and tanks) and thereby provides additional protection for the public. The provisions also address the issue of sufficiency of supply when large appliances are added to a gas distribution network.

The use, especially of LPG in vehicles and vessels, is a well-established practice with their own unique set of circumstances. Specific provisions are included in the Regulation to ensure that any gas system, or alteration of a system in a vehicle or vessel complies with the relevant safety requirement. The requirement to issue a certificate assists to ensure that the safety of the public is maintained.

The provisions in relation to gas work licences and authorisations are made to ensure that only those people with the relevant competencies and skills for the work will be granted a licence or authorisation. The link to competencies and skills ensures that the person undertaking the activity is appropriate for the circumstances.

The Regulation provides for the key elements to be incorporated into a measurement scheme. The listing of these key elements is intended to assist in the development of a measurement scheme that will be approved by the chief executive. The specification in relation to the accuracy and errors associated with a meter provide protection to all customers and consumers of gas.

The specification of rents and fees payable provides certainty in relation to the amounts that the holder of a petroleum authority will have to pay. Application fees have generally been set at a level that covers the cost of assessing an application.

The Regulation provides for an audit and inspection fee. The purpose of this fee is to fund the operations of the Department for administration of chapters 7, 8, 9 and other chapters in their

application for those chapters. The fee has been applied so that total amount of the fee currently collected as the gas testing and inspection fee under the *Gas (Residual Provisions) Regulation 1989* is the same, but the collection of the fee is distributed more equitably across all relevant industry sectors. It is intended that the formula for calculating the individual fees for each sector be reviewed once returns have been received, to ensure the distribution of the fees across the sectors is equitable.

The rate of royalty payable to the State is specified in the Regulations based on the wellhead value of the petroleum produced. Depending on where the custody of the petroleum changes, the sale price may include costs associated with the processing and transportation of the produced petroleum. These costs need to be deducted from the sale price so that the wellhead value can be determined. The Regulation states the allowable deductions for the calculation of the wellhead value of the petroleum for royalty purposes.

The Regulation also addresses the level of knowledge of petroleum resources needed in the assessment of an application for a petroleum lease. This level of knowledge ensures that adequate exploration work has been undertaken to define the resource so that production can commence or if a preference decision in relation to the production of coal or coal seam gas should be made. These provisions provide certainty for the petroleum explorer in relation to the level of knowledge required.

Transitional provisions are provided in relation to non-standard gas, gas devices and existing approvals. These transitional provisions are needed to assist with a smooth transition to the new Regulation.

The *Coal Mining Safety and Health Regulation 2001* is to be amended to provide for mirror provisions related to coal seam gas and coal interaction issues. There is a requirement for a principal hazard management plan for a mining lease if the mining lease is in the area of, or adjacent to, a petroleum lease. These provisions are needed to allow for the early identification and appropriate response to any hazard to coal mining that is created as a result of the petroleum activities.

The amendments to the *Mineral Resources Regulation 2003* provide for the level of knowledge of the resources required in relation to a preference decision about production of coal or coal seam gas. Other issues include the contents of and consultation in relation to a

principal hazard management plan for a mining operation in the area of petroleum lease.

Consistency with authorising law

The proposed Regulation is consistent with the authorising law.

Fundamental legislative principles

The following provisions may be regarded as breaching fundamental legislative principles set out in section 4 of the *Legislative Standards Act 1992*.

Section 7(5) provides that the chief inspector may grant exemptions or change the requirements under a Standard or other document called up in schedule 1. This may be regarded as a Henry-VIII type provision because it allows a third party to change the requirements of the Regulation without having to amend the Regulation itself. Though not completely resolving this issue, the solution of restricting the power of exemption to the chief inspector is justified on the basis that the power can only be exercised by the chief inspector, and will allow industry to investigate innovative and cost effective solutions in appropriate circumstances.

Section 75 and section 170 (s.100AA) allow a third party to change the requirements of the Regulation without having to amend the Regulation itself. This approach is justified on the basis that not allowing an exemption could result in application of the Regulation in situations where it was not intended, resulting in additional costs to industry, and on the basis that the powers can only be exercised following the agreement of two senior statutory officers, subject to particular criteria. No special appeal process is provided due to the robust process to be followed in reaching the decision and because it is a matter regarding the safe utilisation of the State's resources.

Section 79 and section 170 (s.100AC) do not provide a right of appeal on the merits if the chief inspector decides to decline the application or grants the exemption subject to conditions. This is justified on the basis that the powers can only be exercised following the agreement of two senior statutory officers subject to particular criteria, that there is a robust process to be followed in reaching the decision, and because it is a matter regarding the safe utilisation of the State's resources.

Section 107 does not give the licence holder an opportunity to make submissions before the notice is given and does not provide a right of appeal on the merits from the inspector's decision to give the notice. The intent of this provision is to address, in a timely manner, unsafe situations that may arise because of faulty gas work. In terms of community safety, it would be impractical to allow for a submission or appeal process in such circumstances, which would extend the duration of the hazard and inconvenience consumers.

Section 143 does not provide a right of appeal on the merits in relation to the chief inspector's decision that an audit and inspection fee is payable. This is justified on the basis that opportunity is given for a person to make a submission for the chief executive to consider before making a decision and that the decision is based on the fact that the liable person has not provided the required information.

Section 175 (s.19E) does not provide an appeal on the merits from the decision of the Chief Inspector of Coal Mines. This is justified on the basis that the provision is by nature for dispute resolution between parties in relation to the reasonableness of a condition proposed by a petroleum lease holder for inclusion in the principal hazard management plan of the mining lease holder, that the Chief Inspector of Coal Mines must have the agreement of the Chief Inspector, Petroleum and Gas before making the decision, and that one of the parties must elect to refer it to the chief inspector on the understanding that the decision is final and binding.

Consultation

The Department of State Development and Innovation's Business Regulation Reform Unit confirmed that a regulatory impact statement (RIS) was required under the provisions of the *Statutory Instruments Act 1992* and were satisfied with the final RIS that was released for public consultation.

Stakeholders were notified about the RIS and draft Regulation by advertisements in the Australian and Courier Mail newspapers on 27 October 2004 and notification in the Queensland Government Gazette on 29 October 2004. Comments on the RIS and draft Regulation closed on 26 November 2004.

Letters were sent to approximately 200 stakeholders advising them of the RIS and draft Regulation. Also, 120 stakeholders were similarly notified by email.

There was one response specifically on the RIS, which was made by the Queensland Resources Council in support to the new Regulation. However, there were 19 submissions from external stakeholders including the petroleum and pipeline industries and regulatory bodies, and 12 from Queensland Government agencies on the proposed Regulation.

The key issues in the submissions are—

- Stakeholders were concerned that the reporting requirements are onerous in relation to the amount and timing and in some cases duplicated information. Many of these reports are currently prepared by the petroleum industry as a routine part of their business. The duplication of information in some reports is unavoidable if the reports are to be readily accessed in the future.
- Safety related comments included concerns with respect to the responsibilities of various parties such as suppliers and installers in ensuring safety.
- The main concern of the downstream gas industry was the application of authorisations to industrial gas installations.
- The pipeline industry raised issues regarding the internal inspection of pipelines, including the frequency of inspections and the need to inspect all pipelines.
- In the area of measurement, concerns were raised about the application of increased accuracy requirements with respect to gas meters.
- Concerns were raised that there is inequity in the level of knowledge required for both the grant of a petroleum lease and when a preference decision in relation to coal or petroleum is made. Stakeholders stated that the level of knowledge was too high in relation to coal seam gas and that many of the existing leases producing this gas would not meet this requirement for grant.
- Concerns were expressed in relation to the increase in the number and amount of the fees. The amount of and method of calculation of, the audit and inspection fee was of concern.

However, the net revenue obtained from this fee is approximately that obtained under the previous Regulation. The only difference is that the fee has been more equitably distributed across the industry sectors. Licence fees have been increased to better reflect the actual cost of issue and administration.

Notes on Provisions

Section 1 provides for the short title of the Regulation.

Section 2 provides that the proposed Regulation is to commence on 31 December 2004.

Section 3 provides for the dictionary in the schedule to define particular words and phrases in the Regulation.

Section 4 provides for where particular documents referred to in the Regulation may be inspected.

Section 5 prescribes additional substances to be petroleum for the purposes of the safety and measurement chapters of the *Petroleum and Gas (Production and Safety) Act 2004*. Section 10(1)(d) of that Act allows for other substances to be so prescribed. The biogas and gas derived from rubbish tips (landfill gas) are included in the definition of "petroleum" as they can be used as a substitute for or an additive to natural gas, however only the measurement and safety provisions have been applied to those gases.

Section 6 prescribes hydrogen used or intended to be used as fuel for the propulsion of motor vehicles to be fuel gas for the Act. International experiments are underway to establish the viability of using hydrogen in vehicle applications. The incorporation of hydrogen is consistent with other gases currently covered for the propulsion of vehicles and will enable the most efficient inspection regime. Synthetic natural gas, which is a mixture of LPG and air used as a precursor fuel for natural gas appliances before natural gas can be supplied, is also prescribed as a fuel gas.

Section 7 prescribes mandatory and preferred standards for the Act and defines the difference between "mandatory" and "preferred" standards. The section also places limitations on who may grant exemptions to standards. If a standard allows a person to make decisions about the application or otherwise of a Standard, only the

Chief Inspector, Petroleum and Gas can make such a decision. In the absence of this restriction it would be possible for any person to effectively amend a statutory requirement. The alternative of having no means for exemption could stifle innovation and place significant costs on industry. The section also ensures that, to the extent of any conflict, safety requirements under the Act take precedence over generic standards contained in schedule 1.

Section 8 prescribes requirements for the quality standard of fuel gases. For natural gas, the prescribed standard is the recently developed Australian Standard. For LPG used as an engine fuel the Australian Liquefied Petroleum Gas Association Limited (ALPGA) specification is used. For LPG used for heating the ALPGA specification is also used subject to an allowance for greater amounts of propylene in the fuel gas. It is intended that this must not exceed 50%; on average but excursions to 60% are permitted to take into account unusual conditions at refineries where LPG is produced. Excessive amounts of propylene can have a deleterious effect on some gas appliances.

Section 9 provides a specification for the odour to be used in fuel gas, which is a primary method of detection. In the case of natural gas, a number of mixtures are used and so the specification calls up the effect rather than the composition. In the case of LPG, the odourant Ethyl Mercaptan is universally used and the specification calls for a specific concentration which will satisfy the requirement.

Section 10. The Act requires for the safety provisions of the Act that certain activities "as prescribed" are to meet the definition of "Operating Plant". To avoid very small operations (and even domestic residences) falling under the definition, the delivery of non-automotive cylinders has been confined to commercial operations and storage to those premises that would be defined as "dangerous goods locations" under the *Dangerous Goods Safety Management Act 2001*. Large industrial installations (those consuming more than 500TJ of gas per year) and the particularly hazardous uses of gas in theatrical or special effects are also included under the definition of operating plant and will be required to have a Safety Management Plan.

Section 11 outlines that prescribed incidents be reported as required by the Act. The prescribed incidents and how and when they are to be reported are provided in schedule 2.

Section 12 defines particular phrases used in the division about the content of reports required under the Act.

Section 13 prescribes the additional information to be supplied to assist in the assessment of proposed initial work programs lodged with applications for authorities to prospect received in a response to a call for tenders. The work program must include matters about the geological model and to provide an assessment of the factors used to ascertain the area's petroleum potential and the relevance of the proposed activities to test the geological model. The work program that best explores the area of the tenure is one of the key factors in the assessment of the tenders.

Section 14 prescribes additional details that must be included with the proposed initial development plan for a proposed petroleum lease which are considered in deciding whether to approve the proposed initial development plan. The additional information in relation to each natural underground reservoir is to assist in determining whether the area of the proposed lease is appropriate. Information in relation to proposed infrastructure is needed so that the full impact of authorised activities can be assessed.

Section 15 specifies details that must be included in the underground water impact report in addition to the details specified in the Act. These details are required to record the water levels and quality before the commencement of petroleum production. This information will assist in any future claim should an existing Water Act bore become unduly affected as a result of petroleum production. The requirement for a underground water flow model to be a mathematical model is intended to provide an as accurate as possible reflection of the impact of the necessary taking of water as part of petroleum production.

Section 16 prescribes additional details that must be included in the monitoring report for a petroleum tenure. This information in the monitoring report records water levels in the bores identified in the underground water impact report at set times after the commencement of petroleum production. The information in the report can be used to determine the impact petroleum production has had on the water level in the bores and also to allow for an evaluation of the accuracy of the underground water flow model.

Section 17 specifies details that must be included in the review report on an underground water impact report. The information in the review report documents the actual versus the predicted impact of water

levels as estimated using the groundwater flow model. The report represents a formal review of the data as recorded in the monitoring report. If the actual data does not correspond to the underground water flow model, then the model may have to be revised to reflect the actual data. This formal review process ensures that the groundwater flow model remains current and accurately predicts the actual impact of petroleum production.

Section 18 prescribes details, in addition to details required by the Act, that must be included in the pre-closure report on a petroleum tenure. As the pre-closure report is in fact the final review report, the pre-closure report must also include the same requirements as for a review report, with any necessary changes. The information in the report is to ensure that the holder of a petroleum tenure has met, if necessary, the make good obligations with respect to any Water Act bore that has or is likely to become unduly affected by the production of petroleum.

Section 19 prescribes the information that must be included in the notice informing the chief executive of the conversion of a petroleum well to a water supply bore. The provision of this information ensures that the conversion has been undertaken by a licensed water bore driller before the well can be used as a water supply bore or water observation bore or transferred to the landowner.

Section 20 prescribes the specific details that must be included in the relinquishment report required on relinquishment of an area by an authority to prospect holder. The report provides for a summary of the activities and results in relation to the land being relinquished. This information is required so the State and future explorers have access to information about authorised activities carried out on the area. Information in these reports is useful in deciding the land to be made available in a future call for tenders for an authority to prospect.

Section 21 prescribes the specific details that must be included in the relinquishment report for a petroleum lease. The report provides for a summary of the activities and results in relation to the land being relinquished. This information is required so the State and future explorers have access to information about authorised activities carried out on the area.

Section 22 provides that an end of tenure report must include any information consistent with a relinquishment report for an authority to prospect or petroleum lease. If the information has previously been

lodged in a surrender or relinquishment report for the tenure, then the information does not have to be submitted in this report as this is duplication of effort.

Section 23 specifies the details that must be included in the annual report for an authority to prospect. This report is to provide a summary of the activities undertaken during the year. This is a key element in monitoring compliance, especially in relation to the approved work program. The volume, or an estimate of the volume, of underground water taken by the holder in exercising the underground water right is also to be reported. This volume is to include water taken as part of any testing for petroleum production or from a water supply bore. The annual report is to be accompanied by the expenditure statement. This expenditure statement is not part of the annual report and therefore is not to be made available after any confidentiality period ends.

Section 24 specifies details that must be included in the annual report for a petroleum lease. These details include the volume of petroleum produced and its subsequent disposal or use or any petroleum injected into a natural underground reservoir for storage. This information is needed in order to ensure compliance with the conditions for the petroleum lease. An expenditure statement is required to accompany the annual report. This expenditure statement is not part of the annual report and therefore is not to be made available after any confidentiality period ends.

Section 25 provides that an annual report for a data acquisition authority or survey licence must include information about authorised activities carried out and relevant report lodged during the reporting period.

Section 26 provides that an annual report for a water monitoring authority must include information about authorised activities carried out during the reporting period. This information assists in determining whether the holder of the water monitoring authority has been undertaking activities associated with assessing the level of impact of petroleum production or restoration measures on unduly affected bores.

Section 27 requires that an annual report for a petroleum facility licence or pipeline licence must include information about authorised activities carried out during the reporting period.

Section 28 specifies details that must be included in a surrender report that is to accompany an application to surrender a petroleum lease. The information provided enables an assessment to be made of the potential of the lease area to contain additional petroleum or be suitable for storage of petroleum or prescribed storage gases. The report is also to document the activities undertaken under the lease.

Section 29 specifies the details that must be included in a surrender report that is to accompany an application to surrender a pipeline licence. The report is to summarise the methods used to decommission the pipeline.

Section 30 sets out the purpose of the following division.

Section 31 provides for notices of intention to drill a petroleum well or bore to be given by a petroleum tenure holder. The notice is required before the well or bore is drilled and includes where it is to be drilled. Thus the State is fully informed about the likely location and type of current drilling activity.

Section 32 provides for the notice of a change in status of a petroleum well to be given by the holder. The submission of this notice is to ensure that the State is aware of the current status of all wells. This information is important as there are specific requirements in relation to a well that must be addressed before a well can be transferred. The report also provides a mechanism to confirm the need or otherwise for an abandonment report for a well.

Section 33 provides for the notice of intention to conduct a seismic survey or scientific or technical survey. The types of scientific or technical surveys include geochemical, geophysical and geotechnical surveys. The notice is required so the State is informed before the survey is carried out and where it is to be conducted.

Section 34 provides for the notice of completion of a seismic, scientific or technical survey. The notice is required so the State can monitor the lodgement of the relevant report about the survey by the petroleum tenure holder within the required time.

Section 35 specifies the details that must be included in a well proposal report required to accompany a notice of intention to drill a petroleum well. The information in a well proposal report is intended to document the rationale for the drilling and the techniques to be used in the drilling and completion of a well.

Section 36 provides for the specific details that must be included in a daily drilling report by the holder of a petroleum tenure. The daily drilling report provides information in relation to the activities being undertaken at the well site and the results of drilling. This information is useful when a discovery of petroleum is made as the report ensures that the State has sufficient information to assess the significance of the discovery.

Section 37 requires a petroleum tenure holder to lodge a well completion report and sets out the specific details that must be included in it. If the well is plugged and abandoned before the rig release date, the well completion report must be accompanied by a well abandonment report. The well completion report documents the actual technique used in drilling of the well, as well as results of drilling and any subsequent analysis. The report is important in documenting the outcome of the drilling and completion of the requirements for a well proposal report.

Section 38 requires a petroleum tenure holder on plugging and abandoning a well or bore to lodge a well or bore abandonment report and sets out the specific details that must be included in it. This information is required to ensure that the well has been properly abandoned and that activities undertaken since the well or bore was completed are properly documented. The documentation is also important for identifying and recording potential hazards that may be created with respect to the future safe and efficient mining of coal. The report also provides evidence that a well has been properly abandoned before the petroleum tenure ends.

Section 39 requires a petroleum tenure holder on carrying out a seismic survey or reprocessing data from a seismic survey to lodge a seismic survey report and specifies details that must be included in it. The information is to ensure that all aspects associated with the survey are properly documented. This relates to the conduct of the field survey, the processing of the data, and the interpretation of the processed data. The report must be accompanied by the digital data field data and processed data. The provision of the digital data field data enables the data to be made available to future explorers to reprocess the data using latest technology. Availability of processed data enables the future explorers to assess the seismic data without incurring the cost of processing the data. The content of a seismic survey has been specifically stated as it is the most common method used in identifying a natural underground reservoir for drilling.

Section 40 requires a petroleum tenure holder, not later than six months after the completion day for a scientific or technical survey, to lodge a scientific or technical survey report and specifies the details that must be included in it. The information in the report relates to the location of, methodology and results of the survey including geophysical and geochemical surveys.

Section 41 provides for the definition of '6 month period' used in the following provisions.

Section 42 provides for the units to be used in reporting the volume of water, a petroleum product or other substance.

Section 43 requires a petroleum tenure holder to lodge a petroleum production report at six monthly intervals and specifies the details that must be included in it. The volume, or an estimate of the volume, of associated water taken from each natural underground reservoir is also to be included in the report. This report is intended to document the produced petroleum that is used or its manner of disposal. The report also requires information in relation to the number of wells used to produce the petroleum. This provides an indication of the production performance of the natural underground reservoir.

Section 44 provides that, if there are proved and probable reserves of petroleum in the area of a petroleum tenure, the holder is to lodge a petroleum reserves report at six monthly intervals and specifies the details that must be included in it. The information ensures that the State is adequately informed of the current petroleum reserves in Queensland. This information is important for the State to manage its resources and to address any potential insufficiency in supply. This information complements the petroleum production report.

Section 45 provides that, if production testing for a petroleum well is carried out under a petroleum tenure, the holder is to lodge a petroleum testing report and specifies details that must be included in it. This information provides details of the likely capability of a natural underground reservoir to produce commercial quantities of petroleum. The results of this testing assists in determining the techniques to be used to produce the petroleum and to estimate the likely reserves in the natural underground reservoir.

Section 46 requires the holder of a pipeline licence for a transmission pipeline to lodge a petroleum transmission report at six monthly intervals and specifies details that must be included in it. The

information in this report enables the State to know how much and where each petroleum component is being sent both intrastate and interstate. This assists the State in knowing where its resources are being used.

Section 47 provides for the period for which samples must, under the Act, be kept and how the samples are kept. Although the State requires samples to be submitted, the remaining samples are to be kept to ensure that there is an additional set of samples available. If the samples are from a well of particular interest, the State may request additional amounts of the sample to be submitted from those held by the petroleum tenure holder.

Section 48 requires a petroleum tenure holder to keep the cutting samples of the geological formations penetrated as part of drilling a petroleum well and specifies the details about the cutting samples taken, and when and where the samples are to be lodged. The amount of cutting samples to be submitted is intended to provide enough material to allow for later additional analysis to be undertaken. The ability to undertake additional analysis on existing samples assists in ensuring that exploration programs are undertaken on the best available geoscientific information.

Section 49 requires the petroleum tenure holder to keep cores recovered from a petroleum well, and specifies what part of, when and where the samples are to be lodged. The amount of core samples to be submitted is intended to provide enough material to allow for later additional analysis to be undertaken. The ability to undertake additional analysis on existing samples assists in ensuring that exploration programs are undertaken on the best available geoscientific information. Cores samples are particularly useful as the cores are generally accurately located and are not contaminated by mixing of rock types as is the case for cuttings. The cores also provide a continuous section through the rocks intersected and enable a more accurate interpretation of the geological significance, including origin, of the rocks.

Section 50 requires the petroleum tenure holder to keep samples of liquid petroleum recovered from a petroleum well and specifies what part of, as well as, when and where the samples are to be lodged. The amount of fluid samples to be submitted is intended to provide enough material to allow for later additional analysis to be undertaken. The ability to undertake additional analysis on existing samples assists in

ensuring that exploration programs are undertaken on the best available geoscientific information. The availability of fluid samples is of particular benefit in relation to determining the origin of petroleum in natural underground reservoirs. This information is useful in the development of geological models used to explore for petroleum.

Section 51 provides for the various periods during which different types of reports may not be published by the chief executive. The confidentiality period does not apply if the required information relates to an authorised activity conducted on the area of a petroleum tenure that is no longer within the area of the tenure. The confidentiality period reflects the type of information and its commerciality in relation to the holder. This is reflected in that information of greater commercial significance has a longer confidentiality period.

Section 52 provides for the ways in which required information may be published by the chief executive.

Section 53 states the purpose of this Part, which is to prescribe general safety requirements for petroleum exploration and production activities.

Section 54 requires operators of operating plant have operating plant that is fit for its purpose, including being capable of taking necessary remedial action if unplanned, but foreseeable, events occur.

Section 55 obligates petroleum tenure holders to survey wells and identifies the level of accuracy required and the manner in which the survey should be undertaken.

Section 56 requires a survey plan of the surveyed well to be lodged with the chief executive. The plan must comply with the required standard that is published by the Department of Natural Resources and Mines. The section also provides powers for the chief executive to require the plan to be amended within a certain timeframe. The chief executive may also reject the plan.

Section 57 requires certain wells that have intersected coal seams to also have a downhole survey undertaken within certain levels of accuracy. It is intended that where a horizontal well intersects a separate vertical well, that the level of accuracy of the survey should be increased from that achievable in the single horizontal well to that achieved in the vertical wells.

Section 58 prescribes the maximum amount of oil allowable in natural gas to be transported in pipelines. Oil in natural gas pipelines is a contaminant and may cause damage or safety issues for the pipeline operator and downstream users of the gas.

Section 59 prescribes additional matters to be included in a safety management plan for an operating plant in, or adjacent to, a coal mining lease, or in an area where current or abandoned mine workings may exist.

Section 60 requires petroleum wells and bores to be plugged and abandoned in accordance with schedule 3 and with sections 69 and 70 where applicable.

Section 61 provides for requirements with respect to abandoning a shot hole. The hole must be plugged and the site returned as far as practical to its original state. However, any environmental conditions that are inconsistent with this requirement prevail.

Section 62 states the purpose of Chapter 3, which is to make requirements to ensure that petroleum exploration and production activities do not adversely affect current or future safe and efficient mining of coal.

Section 63 applies the chapter to all operating plant in areas of petroleum authority and 1923 Act petroleum tenures.

Section 64 provides definitions for the chapter of 'acceptable level' and 'relevant coal mining area'. In this case, the acceptable level of risk refers to the definition under the *Coal Mining and Safety Health Act 1999*. This is because it is the impact of the petroleum activities on the safety of persons at coal mines that is relevant in this chapter, not the safety of persons at the operating plant in the area of a petroleum authority or 1923 Act tenure.

Section 65 provides additional matters required for safety management plans. These include an assessment of the potential risk that may be created by stimulation activities in coal seams. While it is realised that information for such an assessment may be limited, the intention of this section and a complementary section in the reporting requirements is to increase the data collected and analysed, so that more is known about the impact of stimulation activities on future coal mining. These provisions along with the Australian Coal Association Research Program (ACARP) research project that has

been commenced, will allow for more definitive Regulations to be developed in the future in relation to stimulation activities.

Section 66 requires the location of those hazards or potential hazards to coal mining operations, which, under the Act, have to be reported and surveyed in accordance with the survey requirements in the Regulation.

Section 67 and Schedule 4 provide a comprehensive guide of possible hazards in relation to current or future coal mining that may be created by operating plant such as drilling rigs exploring for or producing petroleum. Many of the activities or impacts listed may not provide a potential hazard but have been included for consideration in a risk assessment undertaken as part of a safety management plan.

Section 68 requires that steel casing not be used in horizontal wells in coal seams. The intention is to not allow steel casing to be used in such situations due the potential to create a significant hazard or sterilise coal resources with respect to future underground coal mining. Exemption provisions are available for situations where steel is contemplated to be used in coal seams which are unlikely to mined in the future.

Section 69 requires operators to use best endeavours to remove all metal equipment from a well that is in, or adjacent to, a coal seam and hence may represent a potential hazard to future coal mining. It is intended that the operator use all available options and spend reasonable time attempting to remove any such objects.

Section 70 requires all significant voids such as cavities that are created by stimulation activities in coal seams to be cemented. This will ensure that the void cannot be filled with gas and create a potential hazard to mining. The intention is the cement should be of a strength that ensures the void is adequately filled. Where possible, the cement strength should allow for ease of future mining of the coal, but the plugging and abandoning requirements prevail.

Section 71 states the application of Division 2 of Part 2 of the Regulation, which relates to operating plant located in or adjacent to the area of a coal mining lease. It is in these overlapping or adjacent areas that particular provisions are needed to ensure the interaction issues between different operations are adequately dealt with.

Section 72 requires an operator of operating plant to stop any activities that may create an unacceptable risk to a person carrying out

coal mining operations or an adverse impact on the safety of coal mining operations. It is intended that such activities are stopped and not resume until the risk is reduced or the activity is modified so that there is no adverse impact.

Section 73 requires an operator of operating plant to stop any activities that may create an unacceptable risk to a person carrying out coal mining operations or an adverse impact on the efficiency of coal mining operations. In this case the impact must be greater than any impact that would have been created by the coal operations themselves. For instance, any impact of gas pre-drainage by the coal miner would have to be undertaken for safe and efficient mining. The activity impacting efficiency could continue if the coal mining lease holder agrees.

Section 74 provides definitions for this Part which deals with exemptions. The definition of relevant requirement outlines those particular provisions where exemptions may be considered.

Section 75 provides the power for the Chief Inspector, Petroleum and Gas, in agreement with the Chief Inspector of Coal Mines, to allow an operating plant to be exempt from certain requirements. It is intended that such an exemption may be given in certain circumstances for one or more of the particular requirements, for one well or a series of wells to be drilled on a tenure, and in relation to a particular seam or for a number of seams. The exemption powers given under this section are essential because applying the Regulation by a zonal or seam-by-seam approach is impractical. Not allowing an exemption process could apply the Regulation in situations where it was not intended and could impose additional costs on industry. The powers can only be exercised following the agreement of two statutory officers subject to particular criteria. No special appeal process is provided for any decision, due to the robustness of the process and because it is matter regarding the utilisation and safety of the State's resources.

Section 76 provides for an application process with regard to exemptions.

Section 77 requires a copy of the application to be provided to any overlapping coal or oil shale mining tenement holder or any adjacent coal mining lease holder. The tenement holder has 20 business days to make a submission to the Chief Inspector, Petroleum and Gas with regard to the exemption application. The applicant for the exemption is given a further 15 business days to respond to any submission.

Section 78 requires the Chief Inspector, Petroleum and Gas to consider any submissions, any responses and other matters when dealing with applications for exemptions. The chief inspector may, but is not bound to, seek advice from a technical advisory committee. It is intended that agreement by the coal tenement holder is not reason enough for an exemption to be provided as ultimately it is for the State to consider the best resource management and safety outcome.

Section 79 provides the process by which the Chief Inspector, Petroleum and Gas must decide the application. It is intended that applications only be made where the coal seam is unlikely to be mined in the future or if it is considered that removing the requirement is unlikely to create an unacceptable level of risk to future coal mining. For existing 1923 Act leases where there is currently no overlapping coal mining tenement, the exemption criteria of which the chief inspector must be satisfied do not apply, although optimisation of both resources must be considered. This is intended to provide greater certainty for existing lease holders with regard to gaining exemptions, and should have no impact on future mine safety, given the location and number of such leases with no overlap.

Section 80 provides that strategic pipelines must be internally inspected at intervals of time. The initial inspection must take place after five or seven years depending on whether or not a pipeline integrity management system is in place. Subsequent inspections are required at 5 or 10 years respectively

Section 81 prescribes the standard to apply for the orderly decommissioning of pipelines constructed under that standard.

Section 82 describes the purpose of the Division, which is to prescribe safety requirements in relation to fuel gas networks. The term fuel gas network includes gas distributions systems and LPG delivery networks.

Section 83 imposes a requirement for the operators of fuel gas networks to take all reasonable and necessary steps to prevent leakage of flammable gas from equipment under the control of the network operator. Such steps may include complying with relevant standards, which may allow some minor leakage. Fuel gas network includes gas mains, fittings, meters, regulators or LPG cylinders and tanks including delivery vehicles.

Section 84 prescribes the standard supply pressures for LPG vapour and natural gas supplied to consumers. It allows for other supply pressures to be allowed in certain circumstances but imposes a restriction on the use of supply pressures that may affect the performance of a gas system. The supply point at which the gauge pressure is prescribed is the meter or if there is no meter, the regulator.

Section 85 requires fuel gas containers to be tested and at what intervals. Testing must be undertaken by an authorised testing station and comply with the prescribed standards.

Section 86. The intention of this section is that distributors and agents of an operator of an LPG delivery network must be included in the safety management plan of the operator and as a result are trained and supervised to a level commensurate with the risks associated with any tasks required to be performed under the safety management plan. It is a safety requirement for the operator, if such agents and distributors are not recorded as a LPG supplier in the plan or do not have the relevant skilled knowledge or experience, then the operator must ensure those persons do not supply gas to consumers.

Section 87 imposes a requirement for fuel gas network operators to have appropriate equipment, experience and expertise to deal with any leaks reported to be coming from the network and to deal with reported leaks expeditiously.

Section 88 imposes a requirement for fuel gas network operators to keep records to show that gas systems supplied with gas were in accordance with the Regulation at the time of initial supply. The type of information to be recorded by the operator includes the date when supply commenced and the licence or authorisation number of the installer who constructed the gas system. The records are to be kept for the period for which fuel gas is supplied to the gas system through the network.

Section 89 states that the following part applies to gas systems supplied, or to be supplied with fuel gas by a network.

Section 90 imposes a requirement on certain parties who wish to (a) conduct a new gas system installation or; (b) add additional gas consuming equipment to an existing gas system. The requirement applies to a gas device (type A) or (type B) with the capacity to consume more than 100 MJ in an hour. In such cases before a person carries out the gas work, the person must notify the relevant network

operator. This is to ensure that there is sufficient gas available to supply the proposed gas system. There are occasions where the existing gas network may need significant upgrade to be able to supply new consumers of operations that increase consumption.

Section 91 nominates the person who must issue a compliance certificate and those who must receive a copy of the certificate of compliance. The certificate must be provided as soon as is practicable after completing the installation.

Section 92 specifies safety requirements for fuel gas network operators that are required to be met before supplying fuel gas to a gas system for the first time, and in the case of LPG whenever a different person first supplies gas. The requirements the installer must meet include ensuring that the pressure at which the gas will be supplied to the gas system is appropriate. It also specifies that there shall be no significant leakage, as defined, from the system. A certificate of compliance must be issued for the gas system within 30 days of the connection and a copy provided to the operator. There is also a general obligation for the network operator to cease supply to installations where it is known, or it should be reasonably known that the gas system does not comply with a relevant safety requirement.

Section 93 imposes obligations on the owner of a gas system to comply with relevant safety requirements including to ensure that the work of constructing gas systems is conducted by competent persons. For this section and section 94 owner has a wider meaning, and includes persons who possess the gas system via a lease or hire purchase agreement. In domestic situations, landlords who own appliances have this obligation rather than the occupier or tenant.

Section 94 imposes an obligation for a gas system operator to notify the owners of gas systems of any known or suspected safety concerns with respect to the gas system.

Section 95 requires the owner of a gas system to act on the written notice of the gas system operator to rectify any non-compliant aspects of a gas system.

Section 96 applies Part 3 to vehicles or vessels that have one or more gas systems.

Section 97 defines the terms used in part 3. Importantly the term dealer has been defined to include for a vessel, a person who is in the business of buying and selling vessels.

Section 98 requires that every new vehicle or vessel (that is water craft) offered for sale must have been issued with an inspection certificate of the gas systems and that a copy of this inspection certificate must be provided to the buyer upon possession. This is an important safety check on gas systems, which can be extremely hazardous if improperly installed.

Section 99 contains the same requirements for used vehicles or vessels as in section 93, with the exception that one being sold to a dealer does not require such a certificate (the dealer must, however, provide one on resale). There is also a requirement that the certificate must not be more than three months old.

Section 100 covers the gas systems of commercial vehicles such as taxis and commercial vessels such as ferries and requires that they be inspected and certified annually. This is currently required and is an important safety check for passenger and other like vehicles. It also includes commercial vehicles such as food vans.

Section 101 requires a certifier to either issue an inspection certificate or identify what needs correction. Once these have been attended to, the certificate must then be issued.

Section 102 requires that a person who alters or repairs a gas system in a vehicle or vessel to give to the owner or operator a certificate stating that all safety requirements are complied with. There is a special requirement for vehicles, which may be used in confined spaces such as forklifts where high concentrations of carbon monoxide in exhaust gases could lead to injury or death.

Section 103 provides alternative labelling requirements for vehicles fitted with LP Gas fuel systems, which is to be used rather than the requirements of the relevant standard AS 1425.

Section 104 requires that the plans and specifications of a gas system in a vessel are to be approved by an inspector prior to use. This enables inspectors to ensure that the gas systems are properly designed.

Section 105 places an obligation on the owner of a vehicle or vessel to take the responsibility for the ongoing safety of the fuel gas system. In particular the owner of any vehicle where carbon monoxide emissions are a significant hazard must ensure that the vehicle remains within the limits – this would particularly apply to persons hiring forklift vehicles.

Section 106 imposes a general requirement for licensed or authorised persons to carry out work that complies with all safety requirements and is undertaken in a professional and thorough manner with respect to work place safety and site restoration.

Section 107 provides the power for inspectors to require defects in gas devices or systems found within three years of the completion of the work to be rectified. The section specifies the time lines for completion of remedial work, together with the penalty provisions applicable. It is not intended to allow consumers to recover the cost of defective work more than once. The intent of this provision is to address in a timely manner unsafe situations which may arise because of faulty gas work. It would be impractical in such circumstances to allow for a submission or appeal process, which could extend the duration of the hazard and unnecessarily inconvenience consumers.

Section 108 applies schedule 6 as the safety requirements for gas devices Type A.

Section 109 refers to schedule 7, which makes the safety requirements with respect to the transportation of cylinders in vehicles.

Section 110 places obligations on installers of cylinders in enclosed spaces inside premises. Where there is a cylinder in an enclosed space such as a cupboard there must be a vent to the outside and the cupboard must be sealed from the room and from the gas device consuming the gas.

Section 111 requires the installation of gas devices in caravans to be installed in compliance with the relevant safety requirements. The installer must ensure that the appliance cannot flow gas when the appliance is in the stored position. This is to ensure that gas hotplates which, when not in use, and slide into a compartment in the vehicle or are otherwise enclosed, cannot continue to operate (either lit or unlit).

Section 112 requires gas cylinders in hot air balloons to not be operated or filed if they have an excessive flow valve. Also puts similar obligations on authorised test stations. This is in line with the Commonwealth Civil Aviation Safety Authority air-worthiness directive AD/BAL/14 (see www.casa.gov.au/avreg/aircraft/ad/ADfiles/lta/bal/BAL-014.pdf). This is required because of the unusually high instantaneous flows associated with the operation of a hot air balloon burner may trigger a spurious shutoff of the excess

flow valve thereby compromising the pilot's control of balloon altitude.

Section 113 refers to schedule 8 which makes the requirements including safety requirements, for using flammable hydrocarbon gases for refrigeration or air conditioning.

Section 114 specifies that there be no decanting of gas cylinders undertake at or adjacent to domestic premises unless the chief inspector has given written approval to do so. This is intended to address complaints of people who have had the smell of LP Gas from filling entering their residences.

Section 115 makes it an offence for a person to knowingly tamper with a gas system.

Section 116 specifies requirements for the qualifications and experience levels for persons who wish to be considered for the issue of a gas licence. It allows for formal qualifications or recognition of prior learning demonstration. The competencies are nominated in the "Queensland Gas Licensing Notes" published on the departments website. The section gives the Chief Inspector, Petroleum and Gas discretion to test individuals who propose to demonstrate competence by means other than standard methods.

Section 117 allows for apprentices to work on gas systems without the requirement for gas licensing, provided they are in the presence of and under the direct supervision of a gas work licence holder who would certify the work.

Section 118 requires an annual fee to be paid for a gas work licence.

Section 119 defines an industrial appliance for the purpose of this Division to be a Type B gas device designed for and using fuel or feedstock in an industrial process.

Section 120 states the five types of Authorisations that can be granted for work associated with Type B gas devices.

Section 121 specifies that the holder of a (industrial appliance) authorisation is allowed to perform work on industrial appliances or gas systems in accordance with the conditions stated in the written authorisation provided by the Chief Inspector, Petroleum and Gas.

Section 122 specifies that the holder of a (hydrocarbon refrigerant) authorisation is allowed to perform work on specialist flammable

refrigerant systems in accordance with the conditions stated on the authorisation granted by the Chief Inspector, Petroleum and Gas.

Section 123 authorises the holder of a gas work authorisation (major project) and a person acting under the holder's authority to develop and construct major gas installations that consume more than 100TJ of fuel gas per year. Generally these projects will include design and construction work in accordance with AS 3814 but the certification of these types of systems will require certification by the authorisation holder (appliance certification).

Section 124 authorises an authorisation holder (motor fuel installation) to undertake motor fuel installations under part 3 in accordance with the conditions stated on the authorisation granted by the Chief Inspector, Petroleum and Gas. These authorisation holders regularly convert car engine systems to run on LPG fuel and perform vehicle inspections to AS 1425 as part of the vehicle registration and ownership transfer process.

Section 125 authorises a holder of an authorisation (servicing) to perform servicing work on Type B gas devices in accordance with the conditions stated on the authorisation granted by the Chief Inspector, Petroleum and Gas.

Section 126 requires the holder of a gas work authorisation to pay an annual fee for the authorisation.

Section 127 sets a prescribed period of 10 years for replacing or testing meters of less than 25m3 per hour capacity The section also requires measurement schemes to outline the method of conversion if the form of measurement changes in the scheme.

Section 128 defined the term "tolerance for error" for different types of meters. The current requirement of +2% / -3% for small meters has been tightened to +1.5% in line with modern production methods. However, for any meters installed before the commencement day a plus or minus 2% tolerance applies. For other sized meters the tolerance stated is +1% which is normal current practice. Note that this tolerance includes the tolerance of ancillary equipment.

Section 129 covers large gas measurement devices and requires that the meter readings be converted to standard conditions of temperature and pressure, that the +1% tolerance applies to the whole measurement and that the meter must be checked at least every six months.

Section 130 covers very large gas measurement devices measuring greater than 1PJ/yr and requires a flow computer to calculate energy delivered and that the accuracy is to be checked every three months.

Section 131 requires that the addition of a gas pressure regulator should not disadvantage consumers. This could occur if a regulator, which is intended to supply gas at a fixed pressure, actually lowers pressure as demand increases – this is called "droop" and can disadvantage consumers if a fixed factor is used for pressure correction.

Section 132 requires that the pressure used for any correction factor in price calculation with any meter must be marked on the meter or in the vicinity of the meter as sometimes this is put on the regulator. This allows consumers to understand how the meter reading is being applied and meter service persons to accurately adjust regulators.

Section 133 provides that the fees under the *Petroleum and Gas (Production and Safety) Act 2004* are set out in schedule 7.

Section 134 specifies the method for payment of annual licence fees for pipeline licences and petroleum facility licences and when the fees are to be paid.

Section 135 obligates certain persons to pay an audit and inspection fee. The purpose of the fee is to provide for audit, inspection, investigations, emergency response and other safety and technical related activities relating to the administration of the Act. The persons required to pay this fee include operators of drilling plant, petroleum producers, processors, distributors and major consumers. With respect to major consumers it is not intended that gas users who fall in another category also be considered as a major consumer.

Section 136 details how the subdivision (payment of a fixed fee by a major consumer applies.

Section 137 prescribes the date for payment for the fixed audit and inspection fee. A late fee is applicable if the fee is not paid by the prescribed day.

Section 138 details how the subdivision (lodgement of audit and inspection fee return and payment of fee by other liable persons) applies.

Section 139 requires a return to be lodged, which contains the necessary information to allow the fee to be determined.

Section 140 provides for a late fee if the return is not lodged by the due date or if the return does not contain the required information. The late fee is payable when the return is provided or a revised return lodged.

Section 141 states that the audit and inspection fee is not liable for payment until the person receives an invoice stating the amount of the fee.

Section 142 requires the fee to be paid within 30 days after receiving the invoice and imposes a late fee for any payment made after that time.

Section 143 allows the Chief Inspector, Petroleum and Gas to give a person a notice if a fee has not been paid, or if the return is incomplete or incorrect. The notice may include the amount of the audit and inspection fee the chief inspector reasonably believes is payable by the person. The section also provides for the chief inspector, after considering any submission by the person, to issue an invoice for the correct fee. There is no appeal provision applying here as this decision has been made, because the liable person has not provided the required information.

Section 144 allows the chief inspector to refund any overpayment of the audit and inspection fee.

Section 145 applies the fees in schedule 10, part 1 for annual rent for authorities to prospect, petroleum leases, data acquisition authorities and water monitoring authorities. The section also prescribes the method of payment of and when the rent is to be paid. If during a year a petroleum authority is surrendered, then that part of the rent for the remainder of the year may be refunded.

Section 146 applies the fees in schedule 10, part 2 for annual rent by the owner of stored petroleum or prescribed storage gas. The section also prescribes the method of payment and when the rent is to be paid. If more than one person is an owner of stored petroleum, then each owner is required to pay the full storage rent.

Section 147 provides for the requirements for the payment of royalty by petroleum producers whether under the *Petroleum and Gas (Production and Safety) Act 2004*, the *Petroleum Act 1923*, or otherwise. It specifies both the time for payment and the method of determining the amount of royalty payable. Generally royalty is

payable at the rate of 10% of the wellhead value of the disposed petroleum.

Section 148 provides for the determination of revenue and allowable deductions in the calculation of the wellhead value of petroleum. These deductions need to be specified as petroleum can be disposed of at different points in the production and transportation chain, for example at the wellhead, after processing or transportation to the customer. The statement of allowable deductions provides greater certainty and consistency for the petroleum producer as to what deductions are allowable.

Section 149 provides for the information to be included in a royalty return. This information is intended to be sufficient to ensure that the amount of royalty to be paid has been accurately calculated.

Section 150 provides for the form of payment of security and the minimum amount to be given to the State for an authority to prospect, data acquisition authority, petroleum lease and water monitoring authority. Security is required to ensure that the State minimises any loss associated with a liability incurred because of an act or omission by the authority or lease holder, for example, not paying monies owed or failure to submit required reports.

Section 151 prescribes the rate of interest of 15% a year for amounts owing to the State, including unpaid petroleum royalty and additional petroleum royalty.

Section 152 provides that the level of knowledge of the reserves of petroleum for an application for a petroleum lease made to commercialise incidental coal seam gas from a mining lease (and for the mining leases with the mineral hydrocarbon) is at least 'contingent resources' as defined by the 'Petroleum Resources Definitions' published by the Society of Petroleum Engineers, World Petroleum Congresses and the American Association of Petroleum Geologists, 2000. For all other petroleum lease applications, the level of knowledge is for 20% of the deposit to be 'proved and probable reserves', and the remainder to be 'low or best estimate contingent resources' as defined by the 'Petroleum Reserves Definitions' and published by the Society of Petroleum Engineers and World Petroleum Congresses, 1997. It is important that an adequate level of knowledge of the resources and reserves in the deposit is established before a petroleum lease is granted. It is essential to have some of the

deposit as proved and probable reserves to justify commercial production.

Section 153 defines the level of knowledge of the resources and reserves required to be identified in a coal or oil shale exploration tenement that overlaps with a petroleum lease application before a preference decision can be made. The section requires 20% of the area of the deposit in the overlap land to be at the level of a reserve as defined by the code and the remainder of the deposit to be at least an indicated or measured resource. It is expected that the area of the lease would only cover the deposit plus any land reasonably needed to mine the deposit.

Section 154 provides that schedule 11 specifies details that must be included in the petroleum register.

Section 155 provides that petroleum lease number 201 is converted from a lease under the *Petroleum Act 1923* to a petroleum lease under the *Petroleum and Gas (Production and Safety) Act 2004*. This lease was granted from an Authority to Prospect that was granted after 23 December 1996 and over land not subject to native title.

Section 156 defines terms used in the transitional provisions regarding the repealed *Gas (Residual Provisions) Regulation 1989*.

Section 157 continues an approval of the quality limits of the gas to be supplied given under the previous Regulation as a gas quality approval under the Act.

Section 158 continues a gas appliance or other approval given under previous Regulation as an approval under the Act.

Section 159 continues under the Act certificates of compliance given under previous Regulation.

Section 160 continues under the Act approvals of plans and specifications given under previous Regulation.

Section 161 continues under the Act approvals of gas systems for vessel propulsion given under previous regulation.

Section 162 continues under the Act exemptions given under previous Regulation.

Section 163 provides a transitional period of six months before the downhole survey and the prohibition of steel casing in horizontal wells provisions apply.

Section 164 provides for the first audit and inspection fee, payable for the year commencing 1 July 2004, to be one-half the yearly fee.

Section 165 states that the following part amends the *Coal Mining Safety and Health Regulation 2001*.

Section 166 inserts a new section that refers to a potential hazard guide in schedule 1A. The guide is a list of potential hazards that may be created by coal mining operations in relation to exploring for or producing coal seam gas or petroleum. The guide may help in the preparation of safety management systems or principal hazard management plans.

Section 167 inserts Division 4 (Principal hazard management plan) comprising sections 12A and 12B with respect to principal hazard management plans into the Regulation. These plans are required where coal mining operations, which by definition include exploration activities on exploration tenures, are being carried out on, or adjacent to, a petroleum lease. The plan must address the matters outlined in the relevant provisions of the *Mineral Resources Regulation 2003* and must be developed in consultation with the petroleum lease holder. A six month transition period allows time for current mining tenure holders to comply with the requirement.

Section 168 inserts a new section to require records to be kept and provided to the chief executive of all abandoned boreholes at a coal mine and any abandoned equipment left in or adjacent to coal seams. The location of any prescribed equipment must be surveyed. The purpose of these records is to have accurate information on potential hazards for future underground coal mining or future petroleum drilling activities.

Section 169 amends section 61 to ensure the plans of the mine workings include information that may impact on future petroleum operations and information on 'mine throughs' of coal seams that have been stimulated by petroleum wells. The latter information will provide valuable information about the impact of stimulation activities on mining conditions.

Section 170 replaces the existing section 100 with the more extensive abandoning and drilling procedures from the *Petroleum and Gas (Production and Safety) Regulation 2004*. A transitional period of six months applies before the downhole survey and the prohibition of steel casing in horizontal wells provisions apply. The section also

inserts exemption provisions to allow the site senior executive to apply for an exemption from complying with the drilling and abandoning procedure in certain circumstances. It is intended that such an exemption may be given in certain circumstances for one or more of the particular requirements, for one well or series of wells to be drilled at a coal mine, and in relation to a particular seam or for a number of seams. It is intended that exemptions will only be provided where the coal seam is unlikely to be mined in the future or if it is considered that removing the requirement is unlikely to create an unacceptable level of risk to future coal mining. The likely impact on the future safe and efficient production of petroleum must also be low, for example wells should be plugged to stop gas loss. The exemption powers given under this section are essential because applying the Regulation by a zonal or seam-by-seam approach is impractical. Not allowing an exemption process could apply the Regulation in situations where it was not intended and could impose additional costs on industry. The powers can only be exercised following the agreement of two statutory officers subject to particular criteria. No special appeal process is provided for any decision, due to the robustness of the process and because it is a matter regarding the utilisation and safety of the State's resources.

Section 171 inserts the potential hazard guide as schedule 1A.

Section 172 amends Schedule 9 (Dictionary) of the *Coal Mining Safety and Health Regulation 2001* by inserting necessary definitions for the amended Regulation.

Section 173 states that the following Part amends the Mineral Resources Regulation 2003.

Section 174 inserts a new section with necessary definitions for the amended Regulation.

Section 175 inserts a number of new sections. Section 19A prescribes the detail of knowledge of the resources and reserves of petroleum required for section 318BA of the *Mineral Resources Act 1989*. That is the level of definition of the deposit in the overlapping land of a mining lease application and an authority to prospect. The section prescribes that at least 20% of the deposit in this overlap land must be proved or probable (1P or 2P) level of reserves and the remainder of the deposit in the land to be contingent low or best estimate resources in terms of the relevant petroleum reserve reporting codes. However, because the relevant petroleum codes lack specific details in

determining reserves and resources, this section provides some additional matters that the Minister must be satisfied about met to ensure the estimate is made on a sound basis. It is intended that in being satisfied about the adequacy of the data used in the estimate, the Minister may consider the relevant coal resource and reserve guidelines, which provide more prescriptive guidance on similar matters.

Inserted section 19B and 19C make it a condition of a mining lease to have a principal hazard management plan where coal mining operations are carried out on, or adjacent to, a petroleum lease. The plan must be in place before the operations start and must be made in consultation with the relevant petroleum lease holder. A similar requirement is provided for in the Coal Mining Safety and Health legislation and it is intended that one plan would be made that meet both regulatory requirements.

Inserted section 19D states the matters which must be addressed in the plan. These include identifying potential effects of the coal mining operations which may impact on persons or plant, or the efficiency of coal seam gas or petroleum operations, identifying the triggers which should be monitored with respect to those matters, and determining appropriate response and reporting procedures.

Inserted section 19E provides for a dispute resolution process with respect to the consultation required in developing the plan. The Chief Inspector, Petroleum and Gas can determine whether a proposed provision for the plan is reasonable or not.

Inserted section 19F requires the holder of a mining lease to cease activities that may create an unacceptable risk to a person carrying out petroleum activities or an adverse impact on efficiency, with respect to relevant petroleum activities. It is intended that such activities cease and not resume until the risk is reduced, or the activity is modified so that it does not have a physical effect on the efficiency of carrying out of the activities under the lease. With respect to efficiency matters, the activity could continue if the petroleum lease holder agrees. The decision process provides for submissions to be made and can only be made with the agreement of two relevant statutory officers.

Section 176 amends section 33 replacing the term hydrocarbons with coal seam gas. The section also extends the exemption, from paying royalty on coal seam gas mined, from paying royalty on coal seam gas used for the mining of any coal associated with mining of the gas. In

this case, the exemption only applies to gas used to mine the coal from which the gas is or has been extracted, and does not extend to other separate mining operations on the lease such as open cut operations. If the gas is used to produce power, which is then used for mining on the lease, this is also exempt, but only to the extent the power is used for allowed mining and not in respect of any additional power used for other purposes. However, as certain existing mining operations may have an expectation that the exemption would apply to gas used for any mining (or gas or coal) on the mining lease, the clause provides that to be the case for those mining leases where underground mining has commenced on 31 December 2004.

Section 177 replaces the term "hydrocarbon" with "coal seam gas" in a heading.

Section 178 replaces existing section 41. The new section states that the value of coal seam gas is to be worked out as prescribed under the *Petroleum and Gas (Production and Safety) Act 2004*.

Section 179 replaces the term "hydrocarbon" with the term "coal seam gas" in a heading.

Section 180 replaces the term "hydrocarbon" with the term "coal seam gas".

Section 181 inserts a new schedule 2A, the potential hazard guide. The guide provides a comprehensive list of possible hazards for petroleum operation that may be created by coal mining operations. Many of the activities or impacts listed may not provide a potential hazard but have been included for consideration in a risk assessment undertaken as part of the principal hazard management plan or safety management system.

Section 182 amends schedule 4 in line with new Act terminology. The royalty rate for coal seam gas is the rate applying to petroleum under the *Petroleum and Gas (Production and Safety) Act 2004*.

Section 183 inserts a new part 5A in schedule 6 with Fees relevant to part 7AA of the Act.

Section 184 amends Schedule 7 inserting necessary definitions for the amended Regulation.

Schedule 1 specifies the declaration of codes, standards and similar documents as "Safety Requirements" for the purposes of the Act, defines their applicability and states whether they are "mandatory"

(where they must be complied with in all aspects) or "preferred" (where the requirements may be followed or other actions taken which maintain the same or reduced level of risk).

Schedule 2 prescribes the incidents, which must be reported and details when and how the report is to be given.

Schedule 3 prescribes requirements for plugging and abandoning wells and bores. These requirements have been put in place to provide an effective method for reducing their impact on future safe and efficient coal mining. They include how wells are to be capped and sealed. It is intended that steel casing should be removed where it is normal practice to do so, but where casing is cemented in place and it is not intended to be removed, the well is to be abandoned as required under section 10. This provides an agreed method which will ensure the well can be efficiently re-entered by a future underground coal miner and the steel casing milled out from the surface prior to mining to ensure this potential hazard is removed. Steel casing is intended to cover any casing than contains metal that may provide a source of ignition, if encountered by mining equipment.

Schedule 4 inserts a potential coal seam gas hazard guide. The guide provides a comprehensive list of possible hazards for coal mining operations that may be created by operating plant such as drilling rigs exploring for or producing petroleum. Many of the activities or impacts listed may not provide a potential hazard but have been included for consideration in a risk assessment undertaken as part of a safety management plan.

Schedule 5 defines the "strategic pipelines" for which there are more onerous inspection requirements. These pipelines are those supplying gas to major population centres or to important industrial users.

Schedule 6 gives details of the safety requirements for gas devices (Type A) which are essentially domestic and light commercial gas appliances. The Safety requirements are equivalent to the "Essential requirements" agreed to by the Gas Technical Regulators of Australia and New Zealand.

Schedule 6, part 1 contains preliminary requirements in sections 1 and 2.

Schedule 6, section 1 covers definitions of terms used in the Schedule.

Schedule 6, section 2 requires instructions to be in English. This is a necessary requirement as so many gas appliances are imported.

Schedule 6, part 2 details the obligations of the device manufacturer in sections 3 to 12.

Schedule 6, section 3 requires manufacturers of Type A devices (basically domestic and commercial appliances) to comply with the requirements.

Schedule 6, section 4 requires the materials of construction to be suitable for the purpose and the environment the appliance will experience.

Schedule 6, section 5 details specific design requirements to ensure that the appliance is safe including abnormal operating conditions.

Schedule 6, section 6 refers to gas leakage and requires that in no case should a dangerous situation occur in operation.

Schedule 6, section 7 specifies that ignition must be reliable and complete.

Schedule 6, section 8 specifies the safety requirements for devices.

Schedule 6, section 9 covers appliance temperatures and requires that safety, particularly of children, must be assured.

Schedule 6, section 10 requires that safety devices be “fail safe” and that they be appropriately marked.

Schedule 6, section 11 refers to the components of an appliance and requires that they be suitable for their purpose and, where not meant to be adjusted, are sealed.

Schedule 6, section 12 details the manufacturer’s instructions which are to accompany a device including essential specifications which describe the appliance and detail its use.

Schedule 6, part 3 deals with the obligations of the supplier of the device in sections 13 to 17.

Schedule 6, section 13 places an obligation on the supplier to comply with the Part.

Schedule 6, section 14 is a general safety requirement that every supplied device must be safe.

Schedule 6, section 15 requires that warning notices, where required, are placed on the device and on its package and that every device is to be supplied with the manufacturer’s instructions.

Schedule 6, section 16 puts similar obligations on suppliers of fittings used in a device and sold separately.

Schedule 6, section 17 refers to warning notices and that they must contain any restrictions on use.

Schedule 7 provides safety requirements with respect to filling and transporting cylinders in vehicles. The safety requirement prohibits the transportation of cylinders of more than 9kg capacity in enclosed vehicles. Further cylinders of 9kg capacity can only be transported in enclosed vehicles when being taken to or form an exchange or filling area. The requirements also state how cylinders are to be stowed when transported in enclosed vehicles and requires labels to be attached to cylinders when they are being supplied or tested.

Part 5 imposes a safety requirement that gas cylinders of an aggregated capacity cannot be filled or supplied to any person if the vehicle they are being transported in is not fitted with flammable gas signs.

Schedule 8 sets out the safety requirements for using flammable hydrocarbon gases as a refrigerant. The explosive nature of these gases means that particular care must be taken to ensure public safety if they are in closed environments, particularly motor vehicle applications. The schedule sets out the requirements for approval under section 733(2) of the Act. These include the preparation of safety report which includes a safety and risk assessment.

Schedule 9, parts 1 to 7 specifies the fees as provided for in the Petroleum and Gas (Production and Safety) Act 2004.

Schedule 9, part 8, provides the relevant formula for determining audit and inspection fees. Each industry sector entity will pay a portion of the total fee payable, based on their level of activity for the year.

Schedule 10 specifies the annual rent for petroleum authorities as provided for in the *Petroleum and Gas (Production and Safety) Act 2004*.

Schedule 11 provides for the specific details that must be included in the petroleum register.

Schedule 12 gives the meaning of particular terms used in the Regulation.

ENDNOTES

1 Laid before the Legislative Assembly on . . .

2 The administering agency is the Department of Natural Resources and Mines.