



Queensland
Government
Natural Resources
and Mines

NEW SAFETY AND TECHNICAL LEGISLATIVE REQUIREMENTS FOR THE PETROLEUM AND GAS INDUSTRIES

An overview for Drilling Operators

Industry presentation by Petroleum and Gas Inspectorate

Brisbane

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ANCIENT HISTORY

- *Petroleum Act 1923* – Covered petroleum exploration and transmission. Petroleum was oil & gas (but not refined product). Heavily tenure oriented.
- *Gas Act 1965* – Covered safety & commercial aspects of downstream natural gas and the LPG supply industry as well as gas usage.
- In both cases supported by highly prescriptive regulations

DRIVERS FOR NEW ERA

- Split of “Mines” and “Energy”
 - New “*Gas Supply Act 2003*” covered commercial aspects of gas supply
- Modern legislative principles –
 - From Prescription to Performance
 - Minimal “approvals” by Govt
 - Safety responsibilities defined.
- Old *Petroleum Act 1923* retained for existing tenure issues only.

P&G ACT 2004

- The *Petroleum and Gas (Production and Safety) Act 2004*
- POLA Act 2004
- *Petroleum and Gas (Production and Safety) Regulation 2004*

All came into effect on 31 December 2004 - implementation to 30/6/05.

- POLA Act No 2 came into effect on 7 March 2005

SAFETY AND TECHNICAL CHAPTERS

- Ch 7 - Quality
- Ch 8 - Measurement
- Ch 9 – Safety
- Ch 10 - Investigations & Enforcement
- (Others such as part Ch 3 – Coal Seam Gas)



Ch 7 - GAS QUALITY

- Requirement is AS4564:2003
- Current Modified requirement for HC Dew Point (10°C)
- Provisions for non-conforming gases
- Odourisation



Ch 8 - MEASUREMENT

- Applies only to custody transfer & Royalty
- Measurement Scheme
- No approvals
- Accuracy requirements



Ch 9 - SAFETY

- Safety Requirements
- Operating Plant
- Safety Management Plans
- Statutory Positions
- Safety Obligations
- Licences and Authorisations

Ch 10 - INVESTIGATIONS & ENFORCEMENT

- Appointment of Inspectors
- Powers & responsibilities
- Statutory Directions
- Non-compliance actions



SAFETY REQUIREMENTS

- Preferred vs mandatory Standards
- Specific Safety Requirements for Drilling – ISO Standards
- No Approvals or Exemptions
- Drilling Industry Code of Practice

WHAT IS OPERATING PLANT?

- “Operating plant” is a term used to define plant, equipment, areas or places of relevant petroleum and gas activities.
- It covers a range of places and activities across a number of industry sectors



OPERATING PLANT

- Exploration and Production Industry (tenure holders, geophysical and cementing facilities)
- Pipelines (Licensed transmission pipelines)
- Petroleum Processing Plant (not refineries)
- Power generation (Gas fired plant that uses more than 500TJ/yr)
- Major Industrial gas use (where more than 500TJ/yr is used)

OPERATING PLANT

Contd

- Natural Gas Distribution (distribution authorities)
- LP Gas Distribution (reticulation networks)
- LPG Distribution networks (LPG cylinder and bulk tanker delivery)
- LPG Storage (major terminal and significant storage)
- Cylinder storage (where there is more than 500L of gas in cylinders)

OPERATOR OBLIGATIONS

- Not carry out activities if there is an unacceptable level of risk to a person or plant at an adjacent of or overlapping coal mining operation (s699A)
- Comply with safety requirements in relation to drilling rigs (Reg s54)
- Comply with safety provisions relating to coal mining (Reg ss62-73)
- Comply with relevant safety requirements in schedule 1, Part 1 of the Regulation

OTHER OBLIGATIONS

- **Owners** - Ensure that operator is competent (s698)
- **Designers, importers, manufactures and suppliers** - Have obligations to ensure plant complies with safety requirements (s696)
- **Installers** - ensure that the installation of plant complies with the safety requirements and certify that the installation complies with all relevant safety requirements (s697).



OTHER PERSONS OBLIGATIONS

- Take all necessary and reasonable action to ensure no person or property is exposed to more than an acceptable level of risk (s699)
- Comply with safety procedures and obligations under the SMP (s702)
- Comply with instructions of operator or supervisor of the plant (s703)
- Not undertake a wilful or reckless act that might adversely affect the safety of anyone at the plant (s704).

SAFETY MANAGEMENT PLANS

Talk Outline

- **Who needs one and for what?**
- **When**
- **What happens with the plan**
- **SMP content**
- **Restrictions**
- **What might one look like**
- **Audit criteria and Safeguard**



WHO NEEDS A SMP AND FOR WHAT?

- All operators of operating plant as defined by s670 and regulation
- Operators are defined under s673
Can be person overall in charge or person in charge of plant in operation
- Plan can relate to more than one plant (s674)

WHEN DO I NEED A SMP? (s674)

- Before commencement of any stage of a plant (stages include commissioning, operating, maintenance or modification and decommissioning)
- If PL application overlaps coal mining tenement, a proposed SMP needed with application.
- Consultation requirements at PL application stage and before operating any plant which may adversely impact on safe and efficient coal mining

WHEN DO I NEED TO REVISE MY SMP? (s678)

- Where appropriate if
 - New or amended safety code, safety requirement or standard
 - Changed circumstances (operations, work practices, technology)
 - Increased level of risk
- When required by CI under s681
- Living document



WHAT HAPPENS WITH THE PLAN?

- SMPs are not lodged with NR&M
- Note proposed SMP must be lodged with overlapping PL application
- SMPs are not approved
- Operator must comply with SMP
- 6 months transition before SMP required
- Companies will be audited

SMP CONTENT REQUIREMENTS (s675) Areas to highlight

- 19 content matters listed in s675 plus additional requirements in regulations
- Need context ie a description of plant operations
- Responsibilities critical particularly where there are multiple plants and contractor owner relationships or coordination arrangements [new s675 (da), see also revised s236]
- Risk assessment a key
- Skills assessment and competency training
- Mechanisms for review and audit
- Record management

SMP Extra Requirements (from P&G Regs)

- Risk assessment with regard to drilling in broken ground (mine workings and goaf) [Reg s59](#)
- Impacts of stimulation on future and current coal mining [Reg s65](#)
- Additional risks by operating in/adjacent to ML [Reg s65](#)



SMP CONTENT REQUIREMENTS (s675) Restrictions

- Content requirements apply to the extent they are appropriate
- Full details may not need to be included because of nature, size or type of plant [s675 (2)]
- Format is flexible – none prescribed, but must map your SMP to legislative content requirements.



SMP AUDIT CRITERIA

- Will be auditing against SMP and operators requirements

STATUTORY POSITIONS

- Executive Safety Manager
 - Most senior officer in Australia
 - Responsible for procedures (SOPs, emergency), equipment , people trained, training records and safety report
- Site Safety Manager
 - Implements SMP on site
 - Induction
 - Compliance/safe working procedures
 - First Aid, equipment etc
 - Staff are trained



OTHER SAFETY OBLIGATIONS

- Designers/Importers/
Manufacturers/ Suppliers
- Installers/(including erectors)
- Owners of equipment
- All persons on the Plant
 - Obligation to themselves
 - Obligation to others

Petroleum Operators Other Obligations (particularly drilling)

Talk Outline

- Drilling Plant standards
- Safety reports and other reports
- Prescribed incidents
- Steel in wells
- Survey
- Will be audited against SMP and operators requirements

DRILLING STANDARDS

- Drilling Standards
 - Drilling Industry supplement
 - Plant Advisory Standard
- Preferred standards
 - ISO Standard

REPORTING OBLIGATIONS

- Annual Safety Report (Act s689-691)
 - Annual Safety Report
- Hazards
 - Location of hazards (Reg s66)
 - Hazard information definition (Reg s12)
- Hazard Reporting
 - End of tenure (Act s546)
 - Relinquishment (Reg s20-21), surrender (Reg s28),
 - Well completion (Reg s37), well abandonment (s38)

REPORTING OBLIGATIONS

contd

- Prescribed incidents (Act s706-708D, sch 2)
 - Must report in manner and time listed in schedule 2
- Designated accidents (Act s705D)
 - Apply to operator of an operating plant who is operating on a mining lease but is not operating under CMS&H
 - Must report to both Chief Inspector and SSE
 - Described in CMS&H Act s198 (2) (b) and details in CMS&H (Reg sch 1)

Other P&G Regulatory requirements re drilling

- Exploration and production safety and other requirements (Chapter 2 Parts 2&3)
 - Plant fit for purpose (see also Act s281)
 - Well abandonment (Act s292 and Reg s60, sch 3)
 - schedule 3 details the requirements

- Safety Provisions relating to coal mining (Chapter 3)
 - No steel in horizontal wells (s68)
 - Removing equipment (s69)
 - Cementing voids (s70)
 - Exemptions (s74-79)

CSG Regime Safety Concepts

- Clear obligations for petroleum explorers/ producers to consider potential impacts on future mining
 - SMP requirements
 - PHMP requirements
 - Consultation requirements
- Common safety regulations which address interaction issues etc



POWERS OF INSPECTORS

- Rights of entry
- Powers of seizure
- Additional powers in emergencies
- Compliance Direction
- Dangerous Situation Direction
- Recovery of costs
- CI can make instructions and alerts
(Instruction No. 1 re Myall Creek)

AUDIT AND INSPECTION FEE

Liable persons include:

- Operators any plant used to drill a well
- Petroleum lease holders
- Petroleum facility licence holders
- Pipeline licence holders
- Distribution authorities
- Operators of an LPG delivery network
- Very large gas users

AUDIT AND INSPECTION FEE

- Must lodge a return form by 30 July 2005
- Form will be available on website and we will be mailing likely persons soon
- Invoices sent out by Department
- Fees are calculated on a proportional base compared with other industry activity
- Fee for 04/05 is half of normal fee
- See s135 – 144 of Regulations and schedule 9, Part 8 for detail

PENALTIES

- Substantially increased penalties -
 - Failure to comply with Safety Requirement - up to \$37,500
 - Failure to comply with a Dangerous Situation Direction - up to \$75,000
 - For act or omission which causes the death of, or grievous bodily harm to, more than 1 person - up to \$375,000 or 3 years imprisonment;



Still to come

- Safety Requirement for Drilling
- Transition to full compliance with AS4564:2003
- Outcomes of Berwyndale
- New Audit procedures & documents
- Fixing the problems (POLA 3? and Regulation changes)

FURTHER INFORMATION

- Website

<http://www.nrm.qld.gov.au/mines/petroleum/index.html>

- Includes forms, guides (section by section guides, SMP guides etc), Q&A, links to legislation

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