



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 ( $10^{\circ}\text{C}$ )
- 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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