

Health and Safety Regulation of Naturally Occurring Radioactive Materials (NORM) in Queensland's Mining Sector

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HISTORICAL BACKGROUND

NOT just about new Uranium (or Rare Earth) mines. But...
debate did trigger a wider review of controls for NORM in QLD

Australia has 30%+ of world's uranium (QLD = ca. AUD\$10 billion)

Public expect highest OHS standards (perception vs. fact)

Past history of mining & processing uranium at Mary Kathleen
between 1956 to 1982 yielding just under 9000 tonnes uranium
oxide concentrate

(REE deposit with U /
rehabilitated ponds / with
current study around geology
& environmental conditions in ponds)



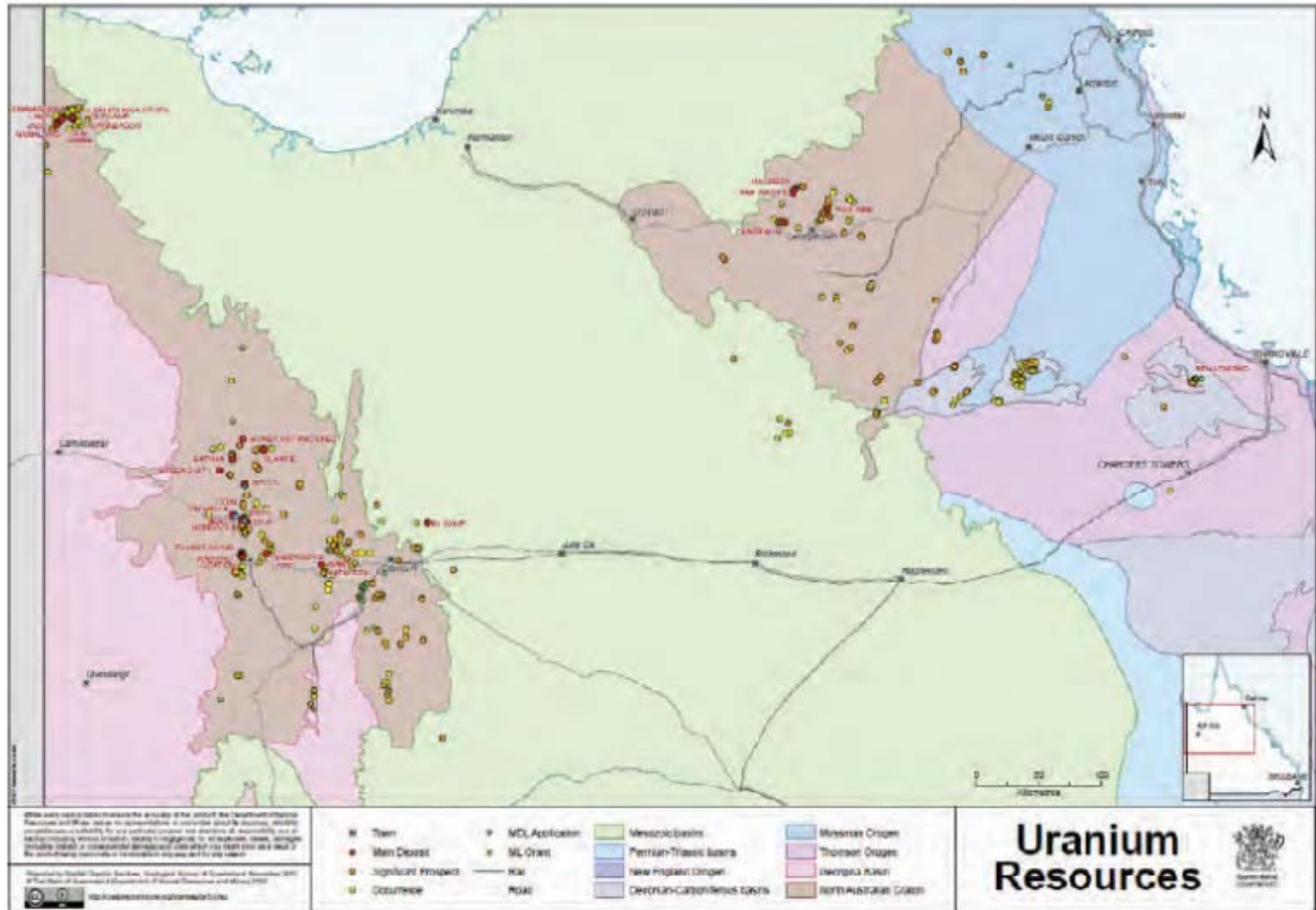
QLD URANIUM DEPOSITS & PROJECTS (1)

- Only exploration allowed until October 2012
- Uranium Mining Implementation Committee Report:
 - delivered “Recommencement of Uranium Mining in Queensland” report in March 2013, and
 - Action points being delivered now...

Four main regional uranium occurrences explored:

- McArthur Basin (North west of Mount Isa to Gulf; Westmoreland)
- Mount Isa Province (70Km W, N & E; Mary Kathleen & Valhalla)
- Gilberton Basin (near Georgetown; Maureen)
- Charters Towers Province (West of Townsville; Ben Lomond)

QLD URANIUM DEPOSITS & PROJECTS (2)



UMIC REPORT CONCLUSIONS RE: OHS (1)

Five Outcomes in total:

- ✓ Current law & regime suitable
- ✓ Specialist Inspector team formed & expertise updated
- ✓ Formalise arrangements with Radiation Safety Unit of QHealth (e.g. joint on-site RMP audits & off-site Incidents)
- ✓ Support ANRDR & input data

Recommencement of uranium mining in Queensland

A best practice framework

Report of the
Uranium Mining Implementation Committee
Councillor Paul Bell AM Chairman

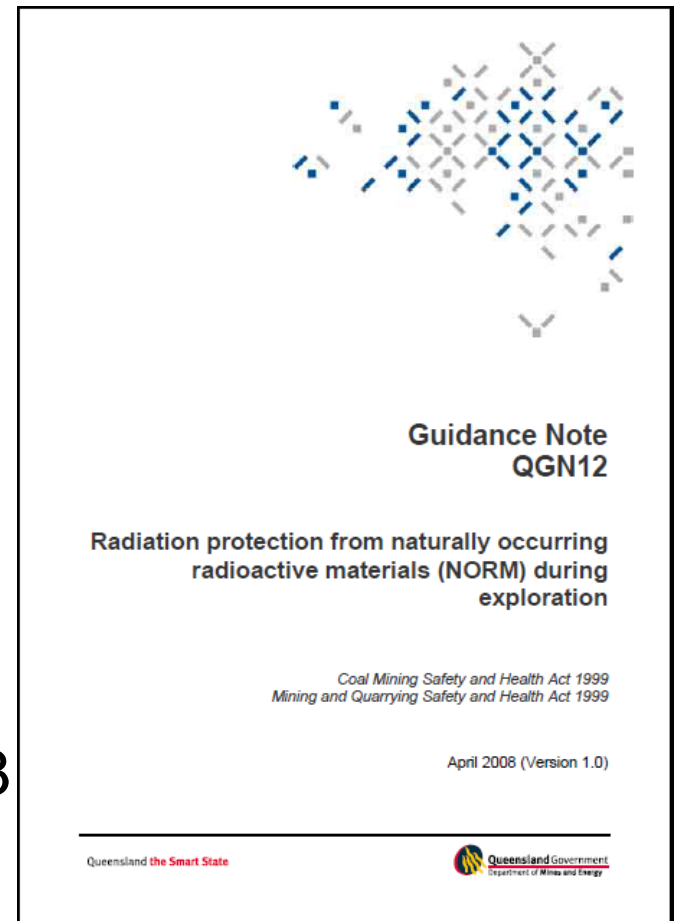
March 2013

Report available at: mines.industry.qld.gov.au

UMIC REPORT CONCLUSIONS RE: OHS (2)

With final remaining item being progressed currently...

- Development of three new Guidelines on Radiation Protection from NORM in:
 - Exploration activities: QGL1
 - Mining activities: QGL 2
 - ISL
 - Open pit
 - Underground
 - Processing activities: QGL 3

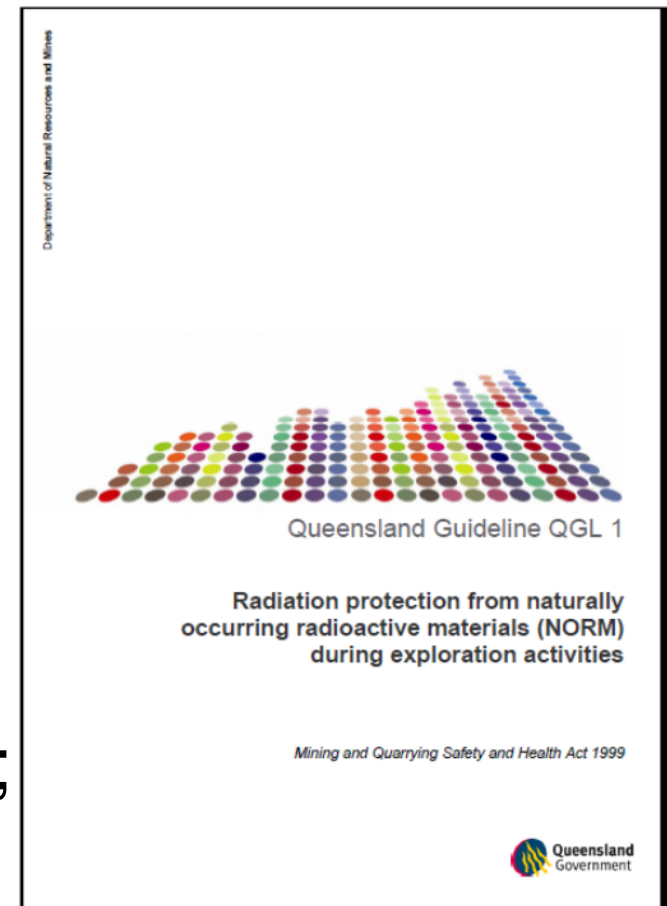


CONTENT OF THE THREE NEW GUIDELINES (1)

QGL1 currently in draft form & based on QGN12
(Input from NSW & NT)

All three documents will:

- have guideline (not guidance note) status;
- have a common format;
- highlight sections directly interpreting / reflecting law;
- and crucially...



CONTENT OF THE THREE NEW GUIDELINES (2)

- require a Radiation Management Plan, which is:
 - compatible with ARPANSA's RPS 9...
 - called a 'MAQRMP', which has detail that...
 - aligns it with WA's RMP content...
 - to give it a standardised structure...
 - with scopes for the various sections...
 - uses OHS language & concepts (e.g. the Robens' model risk assessment & hierarchy of control)...
 - advises on common mining controls...
 - but is not approved.

SUMMARY OF QLD REQUIREMENTS TO MANAGE RADIATION (1)

Overall, QLD treats radiation as any other occupational hygiene issue that a mine must manage and incorporate as an element in its safety & health management system

Excerpt from draft QGL1:

(NB - MQSHA 1999 = Mining and Quarrying Safety and Health Act 1999 & MQSHR 2001 = Mining and Quarrying Safety and Health Regulation 2001)

“

“ Under *The Mining and Quarrying Safety and Health Act 1999*, the site senior executive has an obligation to develop and implement a safety and health management system, ensuring that all the risks – including exposure to ionising radiation - on site are controlled to an acceptable level. The following schematic summaries the various levels of legislative requirements in relation to controlling ionising radiation on mine sites in Queensland:

SUMMARY OF QLD REQUIREMENTS TO MANAGE RADIATION (2)

