REGULATING THE TRANSPORT OF URANIUM ORE CONCENTRATE IN AUSTRALIA

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FEDERAL NUCLEAR REGULATORY FRAMEWORK IN AUSTRALIA

NPT
Comprehensive Safeguards Agreement
Additional Protocol to the Comprehensive Safeguards Agreement

CPPNM
Amended Convention on the Physical Protection of Nuclear Materials

SECURITY
SAFEGUARDS
NUCLEAR COOPERATION AGREEMENTS

ARPANSA
Australian Radiation Protection and Nuclear Safety Act 1988

Dept. of Industry, Innovation & Science
Customs (Prohibited Exports) Regulations 1958

Department of Infrastructure and Regional Development
Australian States’ and Territories’ Regulatory Controls

ASNO
Nuclear Non-Proliferation (Safeguards) Act 1987
REGULATORY REVIEW

PERMITS

Locations Outside Facilities
- L1 Significant + SFM
- L2 Small
- L3 Significant

Associated Technology
- P1 Patents
- P2 Archives
- P3 Communication

Special
- S1 Facility
- S2 Research AT
- S3 Research NM
- S4 Repository

Transport
- T1 Transport UOC - Sea
- T2 Transport UOC - Air
- T3 Transport UOC - Road
- T4 Transport AT, AE

Radiographers
- R1 Significant
- R2 Significant

Significant
- S1
- S2
- S3
- S4

Small
- S1
- S2

Mines/Mills
- U1

Ports/Stevedores
- U4

Labs
- U5

UOC Agents
- U6

Establish Mine
- U7

Decommission Mine
- U8

Mining Industry

2015

2016

2017

2018
PERMIT REVIEW – TRANSPORT OF UOC

Australian UOC exports for 2016-2017 ≈ 7 081 tonnes

• Reduce the regulatory burden on the industry
  - Exploit other existing regulatory requirements

• Provide clear outcome objectives by applying industry performance terminology

• Include a broader consultative stakeholder participation
  - Mines – Consignor, generally produces transport plans for consignments
  - State and Territory Government requirements for transport of Class7 material
  - Carriers – Providing performance “tick and flick” based objectives
  - International best practice

• Meet Australian public’s expectation for the nuclear industry

2ASNO Annual Report 2016-2017
PERMIT CONTENT

PERMIT SECTION

PERMIT HOLDER PARTICULARS

EXECUTIVE LEVEL PERMIT PRINCIPLES

MAXIMUM MATERIAL TRANSPORT LIMIT

INSPECTION REQUIREMENTS ASNO / IAEA

RISK ASSESSMENT

GOVERNANCE

PRE-TRANSPORT

TRANSPORT PLAN

COMPLIANCE CODE

STORAGE INCIDENTAL TO TRANSPORT

DURING TRANSPORT

SCALABLE THREAT MODEL

EMERGENCY PROCEDURES

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REGULATORY REVIEW
ASNO Permits required for transport of UOC

- Permits brought in line with new Permit model
  - Permit Section and Compliance Code section

- Consultation with stakeholders
  - Transport operators
  - Mines (generally provide transport plans)
  - State and Territory Government regulatory bodies

- Review drew on IAEA material
  - Nuclear Security in the Extraction Industry IAEA-TDL-003

1 Nuclear Non-Proliferation (Safeguards) Act 1987
PERMIT FUNCTIONAL FORMAT

Pre – Transport
• Container / Seal Inspection
• Transport Briefing
• Communications Operational Test

During Transport
• Convoy Communication
• Predetermined stops
• Security and Situational Awareness

Interim Storage
• Interim Security Arrangements
• Approved Secure Compounds
• Container storage to be door-to-door

Emergency Response
• Restoring Communications
• Maintaining Security
• Training

Route
Escalated Threat
STORAGE INCIDENTAL TO UOC TRANSPORT

Australian Geographical limitations
• Transporting over long distances
• Unsealed roads in varying condition
• Limited road options
• Weather influences
• Limited communication options

Stationary for short periods (planned and unplanned stoppages)

Secure Location storage requirements for periods beyond 72 hours
SCALABLE THREAT MODEL FOR THE TRANSPORT OF UOC

ASNO utilizes a threat scale based on the Australian National Terrorism Threat Advisory System\(^3\)

Australian Maritime Transport and Offshore Facilities Security Act 2003 in keeping with ISPS\(^4\) requires the application of maritime security levels

- **CERTAIN**: Attack/activities is imminent or occurring
- **EXPECTED**: Movements of UOC are to cease
- **PROBABLE**: Attack/activities is assessed as likely
- **POSSIBLE**: Attack/activities is feasible and could occur
- **NOT EXPECTED**: Baseline nuclear security measures to be applied for the transport of UOC

- **MARSEC 3**: Security incident is probable or imminent
- **MARSEC 2**: Heightened risk of a security incident
- **MARSEC 1**: Normal business operations

Regulating the transport of UOC in Australia

\(^3\)www.nationalsecurity.gov.au

\(^4\)International Ship and Port Facility Security Code 2003
The majority of UOC exports are currently shipped through the Port of Adelaide in the State of South Australia.


Recent action items include:

- Best practice guidance for a model Transport Plan;
- Determining standards and obligations for incident responses,
  - abilities of the broader industry to contribute to a timely response due to extensive distances of transports;
- Industry expertise contributing towards establishing specific training for first responders.
QUESTIONS