Australian Government

Australian Nuclear Science and Technology Organisation

# Progress on Construction of Australia's Replacement Research Reactor (OPAL)

# Overview

- Owner / Operator - ANSTO
- Aims
  - World class neutron research centre
  - Significant radioisotope production capability
  - Replacement for HIFAR

# Overview (continued)

- Procurement Strategy
  - Turnkey contract
  - Detailed and demanding performance specification
- Contractor - INVAP SE
  - Design, construction and commissioning

# Overview (continued)

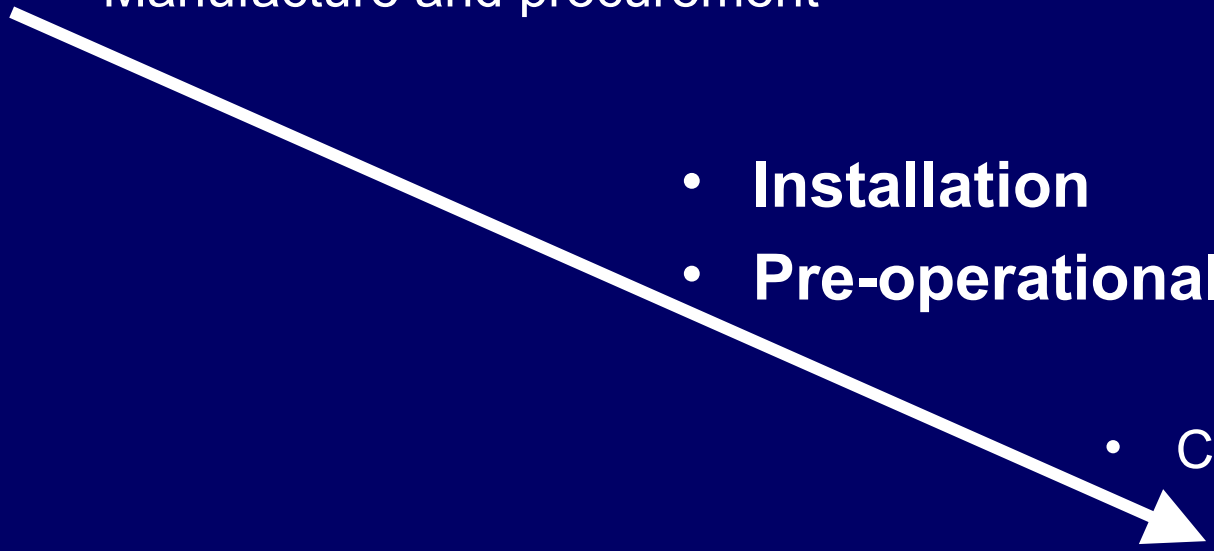
- Budget (Nov 99 $Aust)
  - Original $335.2M - Current $359.6M
- Schedule
  - Originally completion due at end 2005
  - Currently completion expected at end 2006
- Cost and schedule overruns due to:
  - Unexpected geological features
  - Increased security expectations
  - Regulatory complexities

# Reactor

- 20 MW
- Compact core (~300 kW/L)
- Plate type LEU fuel
- $D_2O$ reflector
- Upward coolant flow (light water)

# Current Status

- Project Launch
- Preliminary engineering
- Detail engineering
- Construction
- Manufacture and procurement



- **Installation**
- **Pre-operational testing**

- Commissioning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Crane
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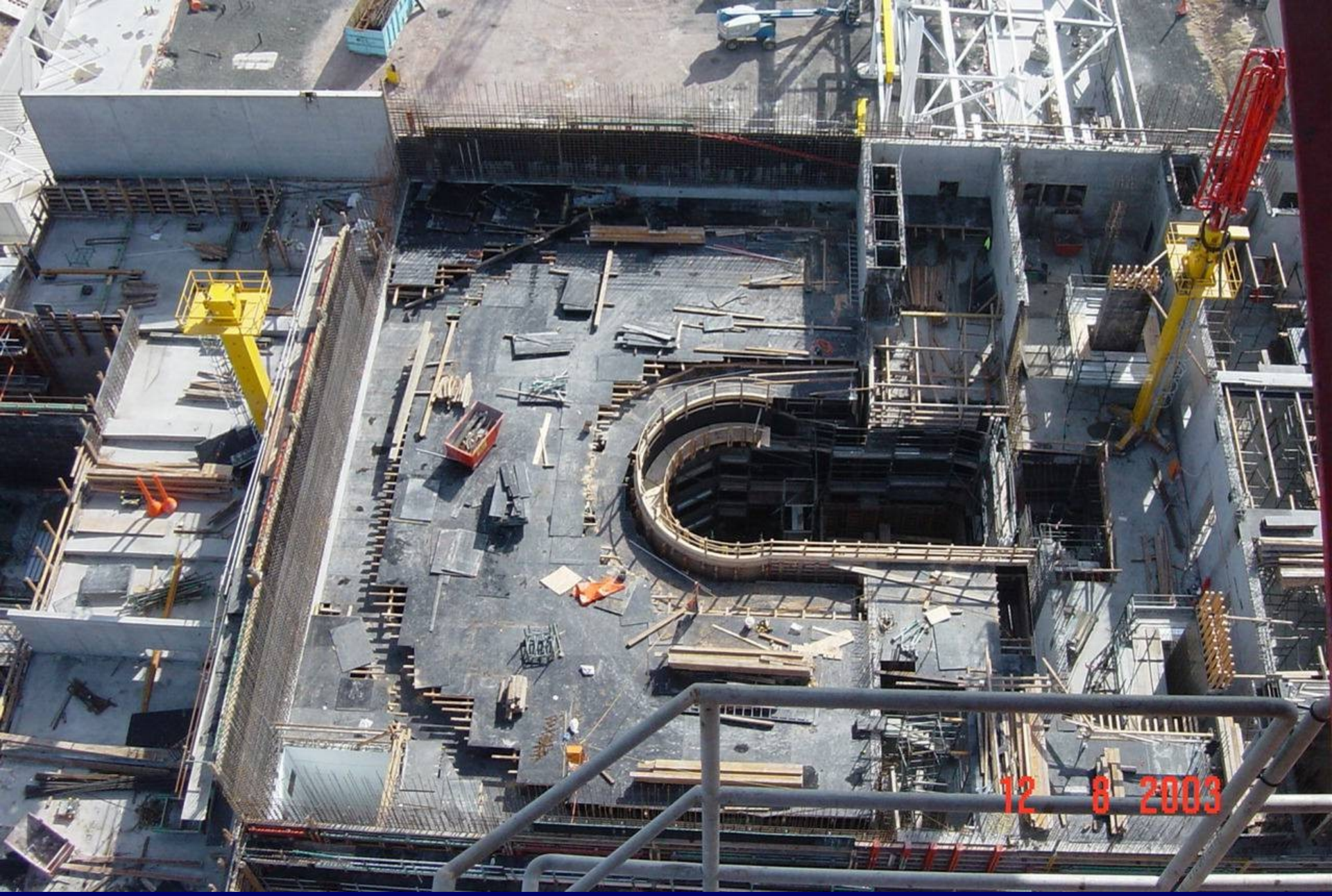
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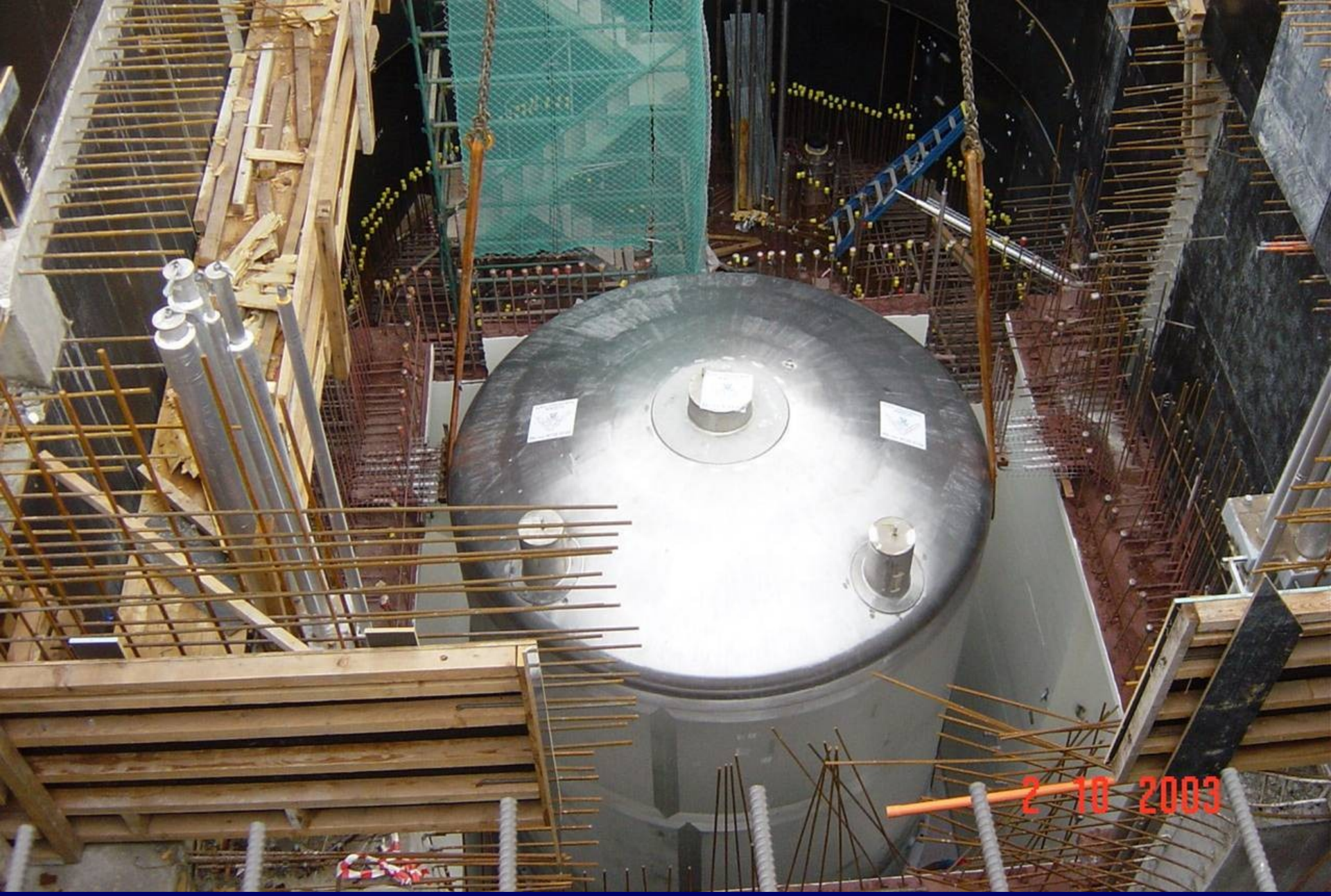
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R·I·P
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TURNING VEHICLE
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Australian Government

INVAP ANSTO


WHEELERS CRANES
JON MONOCRANE


7 10 2003

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INVAP ANSTO


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MENAI
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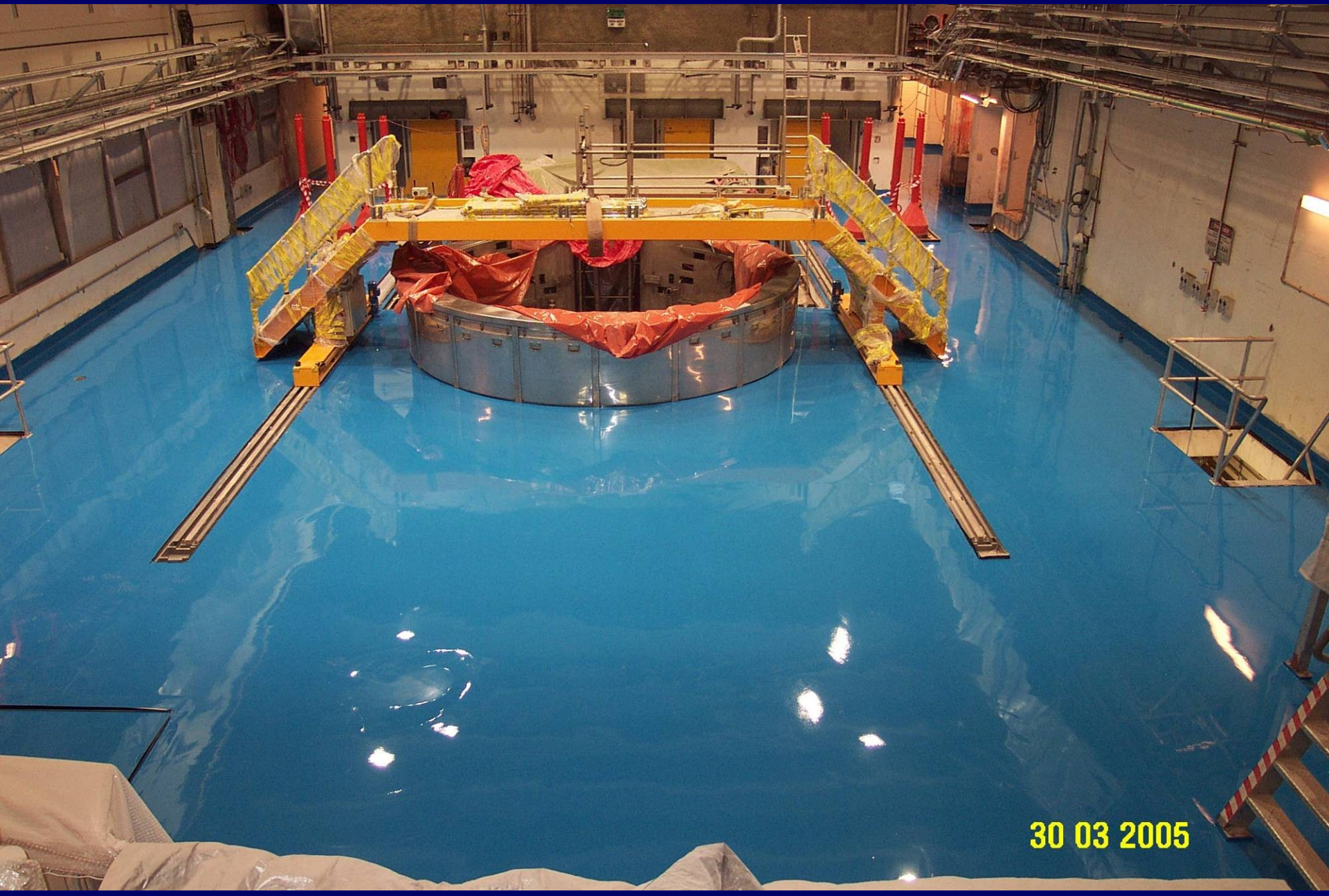

30 03 2005

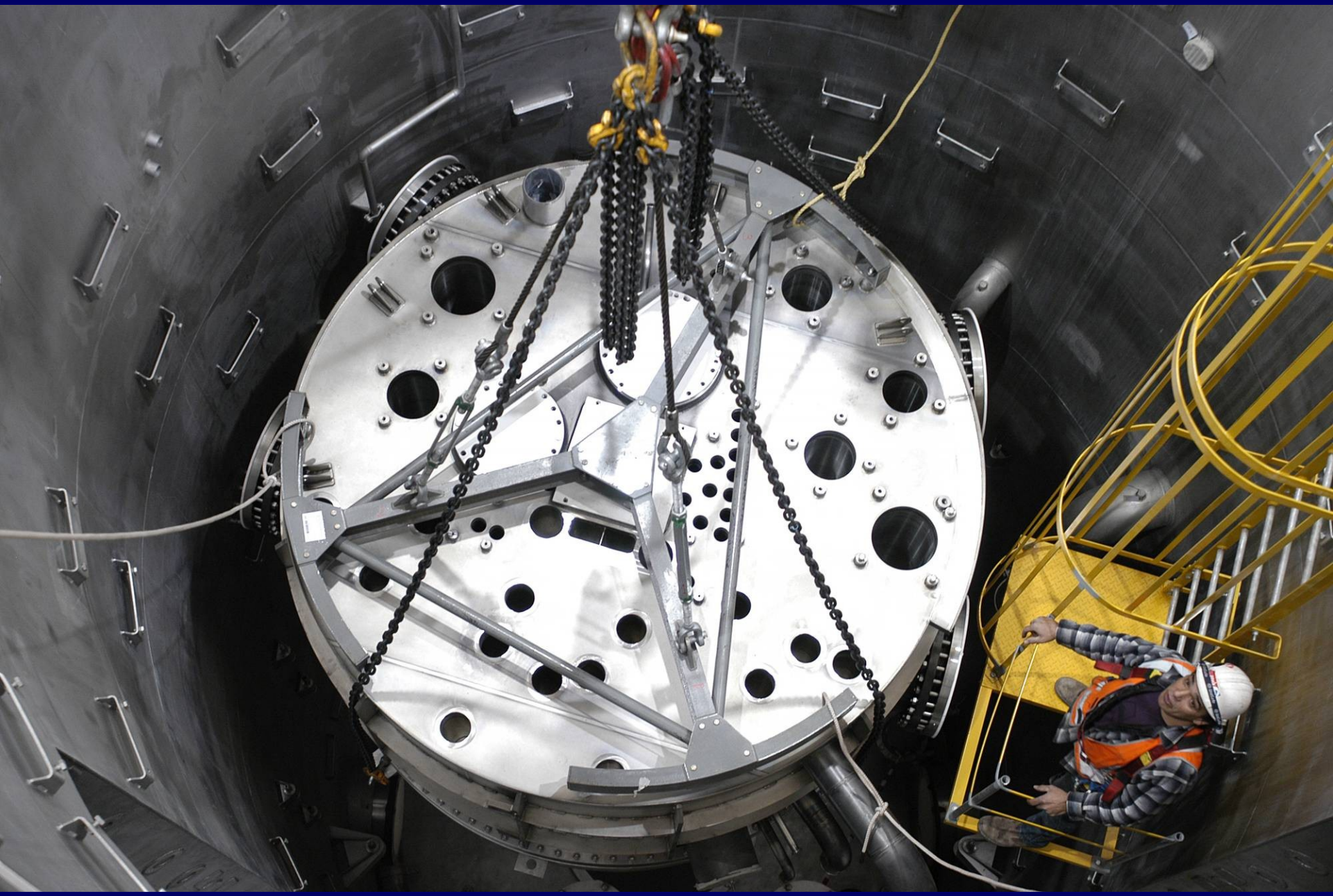

FUERZA AEREA ARGENTINA

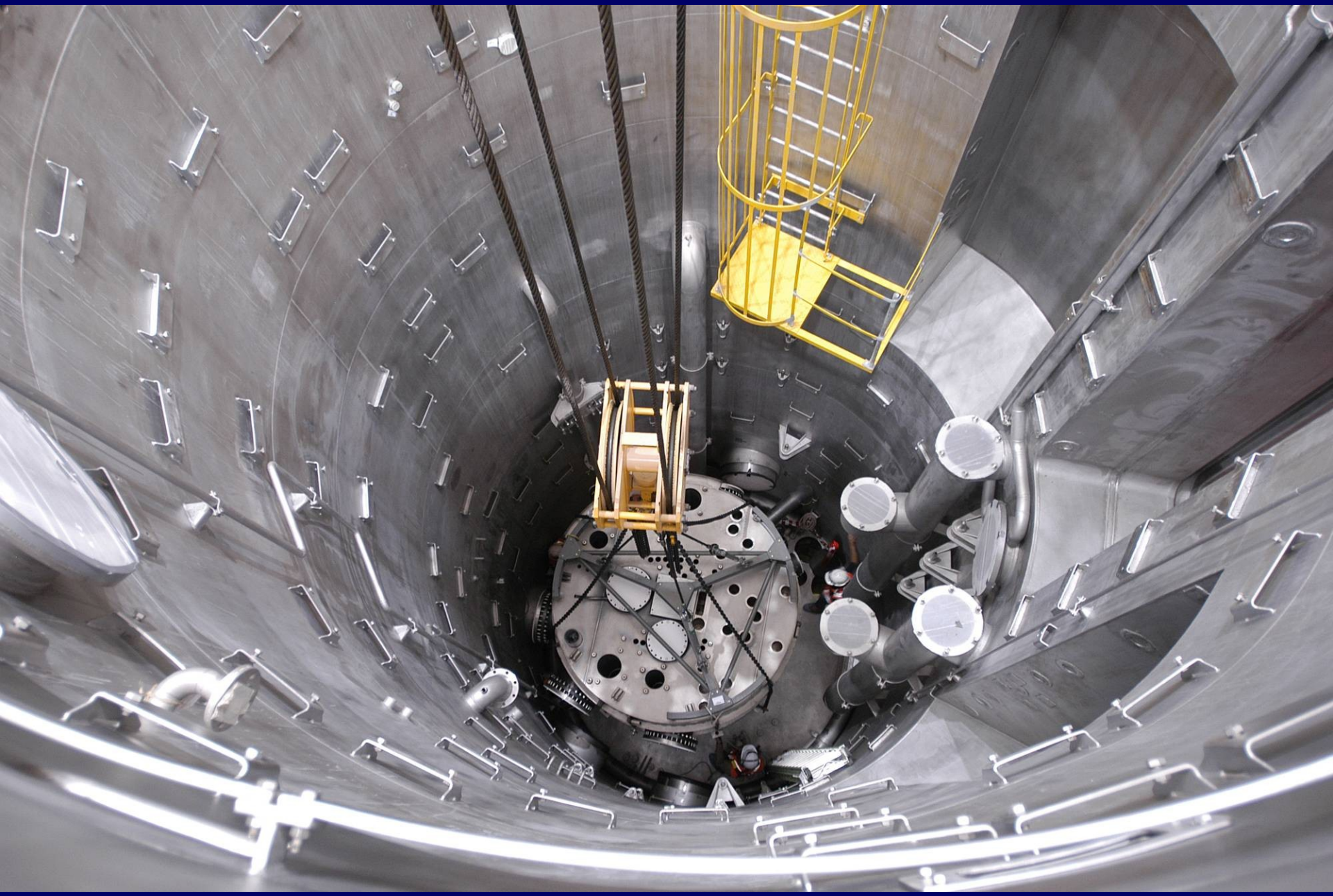

INVAP
PATRICK
PATRICK

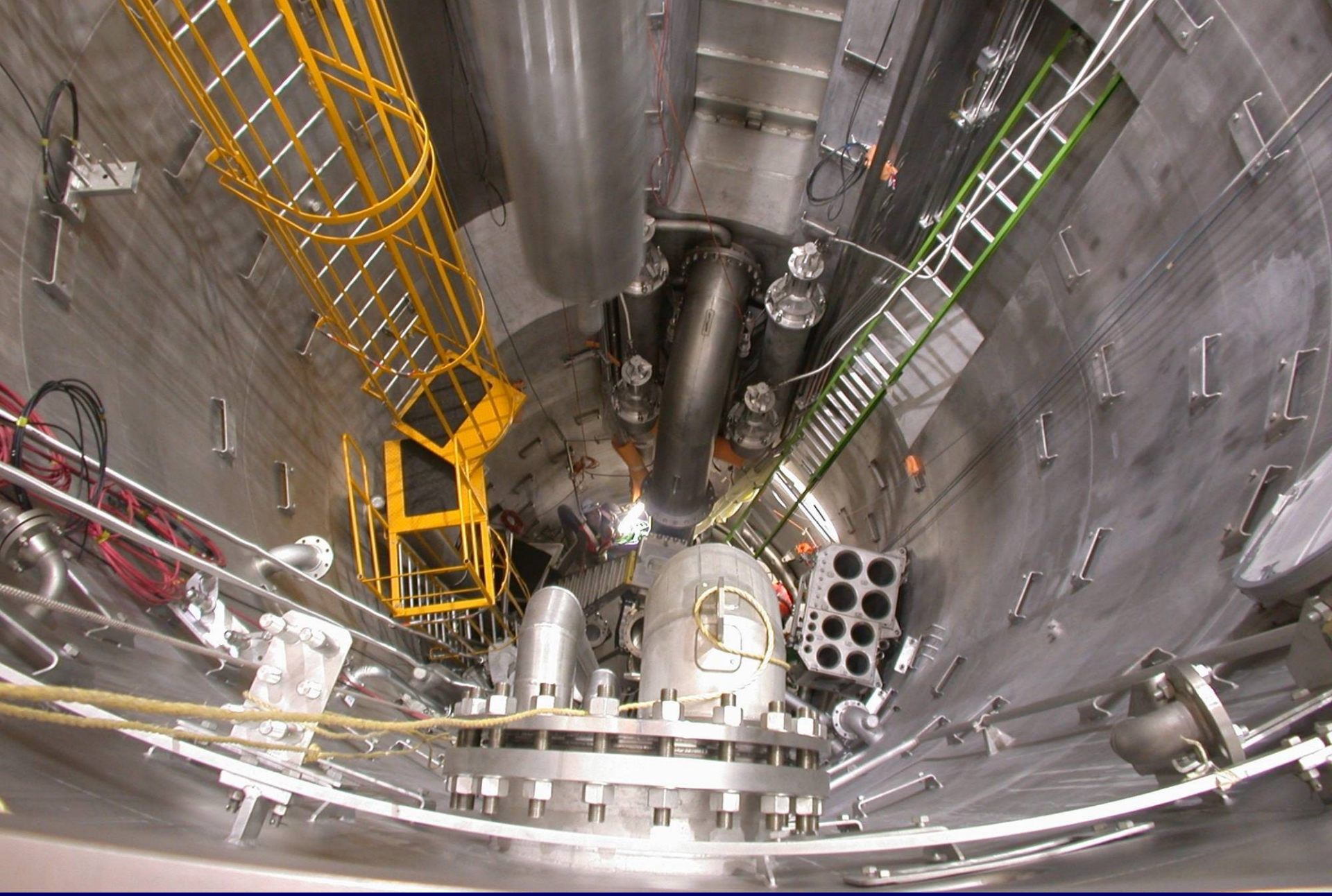

INVAP
OVERSIZE
www.johnstons.com.au


EXIT
DANGER
WORKERS


DANGER
WORKERS
BELOW







# Current Status

- 8 years since project approval by government
- 5 years since contract with INVAP
- Work under the contract is 95% complete
- More than a year to complete the final 5%

# What next ?

- Complete installation and pre-commissioning and commence cold commissioning before the end of the year
- Load fuel during the first half of next year
- Complete the project before the end of 2006