



Australian Government

Australian Nuclear Science and Technology Organisation

ANSTO DECOMMISSIONING ACTIVITIES

Con Lyras

**General Manager Technical Services &
Facilities Management**

ANSTO

- **Began operation with HIFAR in 1958**
- **National facilities**
 - Neutron beams for science
 - Radio-isotopes for medicine and industry
 - Commercial & research irradiations



Major Facilities

- **OPAL research reactor**
 - HIFAR reactor to be decommissioned
- **ANTARES10 MV tandem accelerator**
- **STAR-2 MV Tandetron accelerator**
- **National Medical Cyclotron**

The OPAL Reactor



- **Multi-purpose facility**
- **20 MW thermal power**
- **Plate type Low Enriched Uranium fuel**
- **D₂O reflector**
- **light water coolant**
- **2 independent & diverse shutdown systems**

Operational Divisions

- Reactor Operations
- Safety and Radiation Services
- Technical Services & Facilities Management
- Finance & Administration



Business Units

- ANSTO Radiopharmaceuticals & Industrials (ARI)
- ANSTO Minerals



Research Institutes

- Bragg Institute
- Radiopharmaceutical Research Institute
- Institute for Environmental Research
- Institute of Materials & Engineering Science

Decommissioning Projects

HIFAR

- **HIFAR – High Flux Australian Reactor**
- **Heavy Water Cooled and Moderated Tank Reactor**
- **First Criticality on January 26th 1958**
- **10MW (Thermal) Operation 1960**
- **15 year Design Life**
- **Major Refurbishment in late 1980's**
- **Plant modifications & upgrades.**

MOATA

- **Argonaut type 100 kW**
- **Used primarily for research & training**
- **Commissioned in 1961**

Current Status

HIFAR

- **Decommissioning strategy developed**
- **Public consultation process completed**
- **Transition from Operational to Shut Down completed**
- **All fuel removed from the reactor block**
- **Heavy water removed**

Current Status (cont)

- **Possess or Control submission made**
- **Number of minor projects (in progress)**
 - **Fire Detection**
 - **Radiation monitoring**
 - **Active ventilation & air-conditioning**
 - **Light & power circuits**

MOATA

- **Shut down since 1995**

HIFAR Shell & Hut



Pump House



Cooling Towers (6off)



Cooling Pond



Electrical Building



Next Steps

HIFAR

- **Characterisation**
- **Commence dismantling of all associated structures (Except shell & core)**

MOATA

- **Characterisation**
- **Decommission (within two years)**

MOATA

