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Australian Nuclear Science and Technology Organisation

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Nuclear reactor – Moata – dismantling underway

Preliminary dismantling of Australia's Moata nuclear research reactor, which marks stage two of decommissioning, is completed, ANSTO¹ advised today.

Moata is one of three ANSTO reactors. The first – HIFAR – was shut in 2007 and its replacement OPAL is now fully operational.

Moata – meaning 'gentle-fire' in an Aboriginal language – was a small 100 kW research reactor, 6.4 metres long, 5.8 metres wide and 3.3 metres high. It was built at Lucas Heights in 1961 as a research tool and for neutron radiography, and was shut down in 1995. Soon after shutdown, all fuel was removed and the primary coolant of demineralised water was drained.

MOATA Project Manager Alec Kimber said the preliminary dismantling went like clockwork.

"This stage of decommissioning involved very careful project planning, to ensure all processes and steps had suitable resources. In this dismantling stage we removed control rods and drive assemblies as well as the cooling tanks and pipe work, plus large amounts of graphite from around the core" he said.

"We also removed an 800kg 'lead curtain' which was a shield door with a hole for the neutron beams used in research to escape. All items removed will be stored in specially shielded containers on site until a Commonwealth national waste repository is available," Mr Kimber said.

During this stage, nuclear experts from the International Atomic Energy Agency and other overseas nuclear organisations looking at dismantling similar reactors visited to observe the process. The project team shared its dismantling experience and knowledge with the overseas experts.

The Australian Atomic Energy Commission (now ANSTO) originally acquired the Moata research reactor to train scientists in reactor control and neutron physics and to accumulate experimental nuclear data on the fuel/moderator systems. ANSTO is looking forward to completing the decommissioning process later this year.

For more information please contact ANSTO Media and Community Relations Manager, Sharon Kelly (02) 9717 9575 or 0400 394 085

¹ Australian Nuclear Science and Technology Organisation is Australia's centre of nuclear expertise