

# Heap and In-Situ Leaching

The Minerals business unit has extensive expertise and experience in the field of uranium heap and in-situ leaching (ISL).

The facilities within the Minerals business unit include over 30 temperature controlled 2 m vertical columns, each capable of holding 35 kg of ore and 8 temperature controlled 4 m vertical columns. Custom larger size columns ( $\leq 6$  m) can be constructed for specific applications and to individual designs. Horizontal columns ranging from 1 m ( $\sim 2$  kg of ore) to 2 m columns ( $\sim 6$  kg of ore) are available.

Our range of both vertical and horizontal columns have been specially constructed in-house. Well-equipped laboratory facilities are also available to support column leaching test work programs through conventional stirred tank and bottle roll leaching tests.



Some selected examples of large column leaching programs conducted to support PFS and DFS include the Ranger uranium mine, the Olympic Dam Operation and the Lethakane Uranium Project. For the latter, integrated operation with a solvent extraction mini-plant was also undertaken.

ISL programs have been undertaken for all of the currently operating ISL operations in Australia – Beverley, Four Mile and

Honeymoon. Programs supporting the development of the Manyingee and Bennet Well deposits (W.A.) and for Uranium SA have also been undertaken.

Our ISL experience covers both acid and alkaline ISL systems, with alkaline columns pressurised with oxygen and/or carbon dioxide to simulate the current industry practice.



## About ANSTO's minerals experience

ANSTO has a 40-year track record of providing practical solutions and innovative technology to the mining and minerals processing industries. We have a team of 60+ dedicated professionals and technicians with expertise covering chemical engineering, metallurgy, mineralogy, chemistry, geology and radiation safety working within the Minerals business unit.

We provide process development services, technical review and consulting services, as well as collaborative and contract research on uranium, rare earth and specialty metals processing, radioactivity control and management, novel flowsheet design and modelling, and scoping level engineering / cost estimates.

## Contact

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