

CASE STUDY

MOOMBA TO CROSS-BORDER CSS PIPELINE

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INTRODUCTION

Located in South Australia's Cooper Basin, the Moomba facility plays a vital role in purifying and distributing natural gas to Australia's East Coast. Vertech's Roma branch contributed significantly to the Moomba Carbon Capture and Storage (CCS) project—an innovative initiative aimed at reducing emissions by capturing CO² and securely storing it underground.

PROCESS

Vertech introduced advanced radiography and Non-Destructive Testing (NDT) techniques to ensure the pipeline's integrity under demanding environmental conditions. Utilising JME Crawlers, Rigaku X-ray tubes, computerised radiography, wet film radiography, and mobile darkroom units, the team conducted critical inspections on a 55 km DN250 carbon steel pipeline designed for high-pressure CO² transport.

The project involved several key phases: capturing CO² via stainless steel headers, compression using a four-stage centrifugal compressor, dehydration through a Tri-Ethylene Glycol unit, transportation through the pipeline, and final injection into underground reservoirs—all requiring precise monitoring and technical assurance.

OUTCOME

Commissioned by MPC Kinetic, Vertech's skilled NDT team ensured all inspection criteria and industry standards were met. The pipeline was validated for safe, efficient CO² storage, supporting Australia's broader sustainability goals. Scheduled for completion in 2024, the Moomba CCS project stands as a landmark in carbon management and clean energy development.

