

Pfizer

Bulk Pharmaceutical Manufacturing Facility

Tuas Biomedical Park 1, Singapore



Project
Organic Synthetic Production Facility

Client
Pfizer Asia Pacific Pte Ltd

Value
US\$350 M

Assignment
Engineering, Procurement and
Construction Management

Completion
December 2002



Jacobs Lend Lease was engaged to provide Engineering, Procurement, and Construction Management (EPCM) services for the delivery of the US\$350 million Greenfield pharmaceutical chemical plant for Pfizer.

The facility sits on a single 8.8-hectare site located in the Tuas Biomedical Park, Singapore. This 150 ton p.a. manufacturing plant is designed to house 28 reactors producing state-of-the-art chemical intermediates and APIs.

The 44,000 sqm project involved the construction of a five-storey manufacturing building, a warehouse with dispensary, wastewater treatment plant, tank farm, solvent recovery, thermal oxidizer and associated infrastructure. It also included the construction of a two-storey administration building with QA/QC laboratories, a central utilities building and a two-storey engineering maintenance building.

Process engineering and equipment procurement were carried out in Cork, Ireland. Non-process engineering, local procurement and construction management were undertaken in Singapore. Local Singaporean consultants were engaged to assist in the authority permitting process and localization of design.

The construction of the facility was typical of local Singapore techniques for structural and architectural elements with a high quality of cGMP finishes required for the process areas to suit function and purpose.

Challenges faced by the project team included significant soil subsidence arising from the poor geotechnical conditions, with the site sitting on land reclaimed from the sea less than 5 years before construction started.

The project was designed and constructed on a fast track schedule with construction commencing in April 2000 and completion attained for the non-process areas in December 2001 and the process facility in December 2002.

Construction work force originating from over 20 nationalities peaked at 2,200 personnel with close to 10 million man-hours being clocked to deliver the facility.

The project was awarded 2 Gold Medals by the Singapore Ministry of Manpower for construction safety excellence.

Due to the fast track nature of this project, detailed design and construction documentation overlapped with construction. Commissioning and Qualifications (IQ/OQ) were carried out in 2002 with process validation of initial trial batches commencing in March, 2003.

