

YEMEN

ADEN SEWERAGE PROJECT

Location

Aden

Client

National Water and Sanitation Authority (NWSA), Sana'a, and Local Water and Sanitation Corporation (LWSC), Aden

Financing

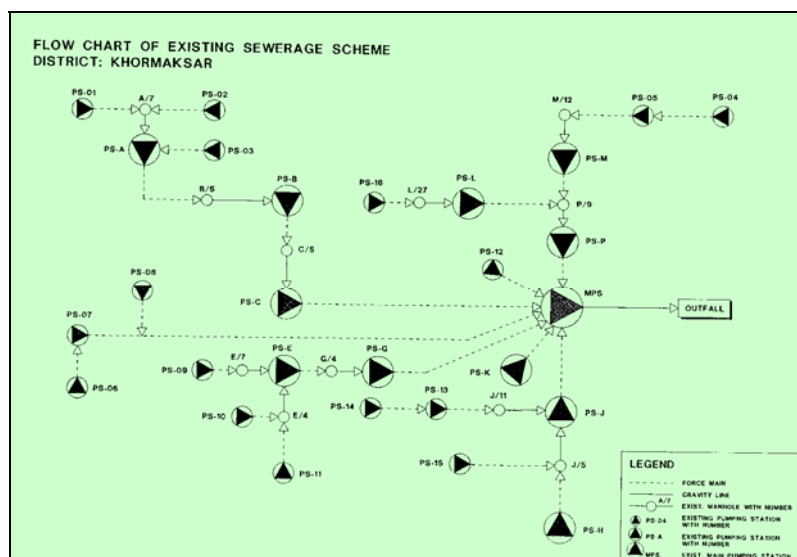
German Financial Cooperation / KfW

Period

1993 - 2011

Value of own Services

3.916 million US\$



Project Description

Upgrading of the existing sewerage system of central Aden comprising the sewage collection systems of Ma'alla, Tawahi, Crater and Khormaksar with some 180,000 inh. in the year 2000.

The system includes

- 1,000 m of new sewers
- 2,500 m of overloaded gravity sewers to be replaced
- 21,700 m of frequently collapsed sewers to be replaced
- 6,900 m of sweeper passages to be converted into a piped system
- 30,100 m of force mains
- 4 main pumping stations
- 40 small pumping stations

Aiming at the final disposal of some 105,000 m³/d at a suitable sized treatment plant.

Scope of Services

Feasibility Study (1993 – 1995):

- Review and update of the existing feasibility study "Sewerage System in Aden"
- Planning of sewage evacuation and treatment alternatives
- Consideration of effluent re-use, marine-discharge of mechanically treated sewage
- Justification of project and environmental impact study
- Re-design of proposed project measures
- Proposals for a tariff system, operation and maintenance concept
- Post-construction institution building and staff training proposals

Final Design and Preparation of Tender Documents (1996 – 1998):

- Topographical surveys and soil investigations
- Structural design and stress calculation
- Engineering report and confidential cost estimate
- Tender documents (including instructions to tender, conditions of contract, technical specifications, bill of quantities and construction drawings)
- Prequalification of contractors

Construction Supervision of Contracts 1 and 2 (1998 – 2002) and Contract 3 (2004 – 2010):

- Tendering, evaluation of tender, assistance during award of supply and construction contracts
- Construction supervision
- Monitoring of maintenance and guarantee

(Leading Partner of Joint Venture)