

PROJECT:-

**JOHOR BAHRU WATER SUPPLY PRIVATIZATION PROJECT
– INTAKE IMPROVEMENT WORKS**

LOCATION :-

Kota Tinggi, Johor Bahru Takzim

OWNER :-

Badan Kawalselia Air Johor (BAKAJ)

Client:-

Equiventures Sdn Bhd

Project Cost:-

RM8 Million

COMPLETION DATE:-

JUNE 2003

The project involves the feasibility study, concept design, detailed engineering design and construction supervision of a Supplementary Intake to augment raw water abstraction during low water level in Sg. Johor.

The Detail Works include:-

Intake Sump

- The low level abstraction point intake sump was set to abstract the lowest water level ever experienced;
- Siltation abstraction via portable sump pump, floating pontoon and fixed screening were also provided;
- Due to fluctuation in river bed profile, 6 nos of emergency abstraction pipes were also installed;
- The six (6) entry points could be isolated by penstock controls;
- The whole structure is supported by 350mm dia spun piles to overcome bending and torsion.

Raw Water Pump

- 3 units of submersible axial pumps, suitable for high flow and low head conditions were selected;
- Each variable speed driven pump is rated at 172Mld.

Transfer Channel and Energy Breakers

- A 4m wide reinforced concrete transfer channel was selected;
- The soffit of the channel was located just above tie-rods that supports the existing sheet pile wall;
- Energy breakers in the form of RC slabs and a combination of rocks were provided in the existing forebay.

Power Station

- A new TNB substation located above the 100 year flood level was provided;
- The work includes modification to the existing SCADA system.

SERVICES PROVIDED:-

- Feasibility Study and Concept Design
- Detailed Engineering Design
- Tender Documentation
- Construction Supervision
- Testing and Commissioning



AERIAL VIEW OF SG. JOHOR INTAKE



SG. JOHOR RAW WATER INTAKE