

Republic Cement Plant Expansion

Detailed Design and Construction Management of a Cement Plant



Client

PEG S. A..

Project

Republic Cement Plant Expansion

Location

Norzagaray, Bulacan
Philippines

Project Period

Start July 1994
End December 1997

Project Description:

Republic Cement Corporation intended to expand their cement plant in Norzagaray, Bulacan and has contracted to PEG S.A. Geneva the planning, engineering and construction management for the M&E equipment and the civil works. PEG has subcontracted to Trans-Asia the basic and detail engineering and the tendering of the civil works.

The project has been divided into two (2) lots, comprising of the following structures and facilities:

Lot No. 1

- Raw mill feeding bins
- Raw mill silo
- Clinker silo
- Cement mill feeding bins and cement mill building
- Cement silo
- Auxilliary structures and utilities

Lot No. 2

- Surface drainage and field site installations
- Primary crusher foundations and buildings
- Sampling tower structure and foundations
- Material hall and conveyor systems
- Additive hall and conveyors related to the additives
- Raw mill building and mill foundations
- Raw mill and kiln feed systems
- Electrostatic precipitator foundation and accessory buildings
- Preheater structural tower and foundations
- Kiln piers and related foundations
- Cooler and clinker transport foundations
- Kiln burner floor and cover (if any)
- Cooler dust collector foundations
- Electrical rooms and auxiliary buildings
- Central control room with production office and laboratory
- Finish mill buildings and foundations
- Substation and cable gallery



TRANS-ASIA

Lot No. 2 also includes the following utilities and materials:

- Ducts
- Water Distribution system
- Fuel oil piping
- Service equipment
- Cable galleries
- Raceways
- Insulation and brickworks

Scope of Services

The scope of services of Trans-Asia is described in detail in the following:

1. Module I (Preliminary Design and Tendering) for Lot No. 1
 - Preparation of Request for Bids (Preliminary Design)
 - Tender's Evaluation
 - Soil Test Interpretation and Geotechnical Studies
 - Ocular Site Inspection
 - Cost and Unit Price Analysis.
2. Module II (Detail Design) for Lot No. 1
 - Evaluation of geotechnical investigation results for foundation values
 - Detail design of the structures and their foundations including equipment foundations for the facilities included in Lot No. 1
 - Detail design of mechanical and electrical utilities for these facilities
 - Detail design of miscellaneous site works such as grading, paving and drainage
 - **Preparation of construction drawings**
 - Preparation of the final contract agreement including finalization of bill of quantities, technical specifications, general, particular and special conditions of contract
 - Provision of engineering support during construction.
3. Module I (Tender Design) for Lot No. 2
 - Preliminary design and preparation of tender drawings for the civil works of the facilities included in Lot No. 2
 - Preliminary design and preparation of tender drawings for the large ducts, water distribution system, fuel oil piping, service equipment, cable galleries, raceways, included in Lot No. 2
 - Preparation of tender documents including bills of quantities, technical specifications and the general, particular and special conditions of contract
 - Preparation of tendering schedules and organization of pre-bid conferences
 - Prequalification and recommendation for shortlisting of possible bidders
 - Assisting the Owner in issuance of tenders
 - Preparation of criteria for evaluation of bids
 - Evaluation of bids
 - Preparation of weak -points list for clarification by bidders.
4. Module II (Detail Design) for Lot No. 2
 - Evaluation of geotechnical investigation results for foundation values
 - Detail design of the structures and their foundations including equipment foundations for the facilities included in Lot No. 2
 - Detail design of ducts, piping, cabling, cable galleries, etc.
 - Detail design of miscellaneous site works such as grading, paving and drainage
 - **Preparation of construction drawings**
 - Preparation of the final contract agreement including finalization of bill of quantities, technical specifications, general, particular and special conditions of contract.
 - Provision of engineering support during construction.

Trans-Asia also provided construction management and supervision services for PEG S.A. for the construction and installation of the Lot 1 and Lot 2 structures and facilities.

The geotechnical investigation services were likewise undertaken by Trans-Asia but under a contract with Republic Cement Corporation.



Making
Technology
Work