

Chapter 1

Introduction

Chapter I Introduction

1.1 Background of the project

The Poola Subbaiah Veligonda Project (PSVGP) located in Markapur, Prakasam district, Andhra Pradesh was taken up by Government of Andhra Pradesh (GoAP) in 2004. The objective of the project was to create an irrigation potential of 4.38 lakh acres¹ (Irrigation Dry ayacut) and to provide drinking water facilities to 15.00 lakh people in drought prone and fluoride affected areas of 29 mandals across Prakasam, SPSR Nellore and YSR Kadapa districts. The project was envisaged to draw 43.50 TMC (Thousand Million Cubic feet) of Krishna water for a period of 30 days during flood days, by gravity, from back waters of Neelam Sanjeeva Reddy Sagar Project (Srisailem Project) near Kollam vagu in Andhra Pradesh.

GoAP gave administrative sanction² (July 2004) for commencement of project and execution of the project was commenced in August 2005. The various components of the project include construction of two tunnels³ for drawl of water, execution of feeder canal to transfer water to reservoir, execution of link canal and formation of reservoir by constructing NOF dams (at Sunkesula, Gottipadia and Kakarla) to store water with a gross storage capacity⁴ of 53.85 TMC, Construction of main canals and distribution network for supply of water to create the required irrigation potential with drinking water facility to the three districts. As of March 2022, for execution of the project, 17,906 acres out of the required land of 28,529 acres was acquired.

In view of the magnitude of work involved, the execution of the project was divided into two stages (Stage I and II) consisting of seven packages as shown in **Chart 1.1**. The Stage I works planned to be completed by August 2008 and Stage II by August 2013, are still in progress even after a lapse of more than 13 and eight years respectively from the stipulated period of completion. All the works were initially awarded on *Engineering, Procurement and Construction* (EPC) mode of contract. However, while the works were in progress, due to various reasons contractors were changed and works were awarded on Lumpsum (LS) contract system in certain packages.

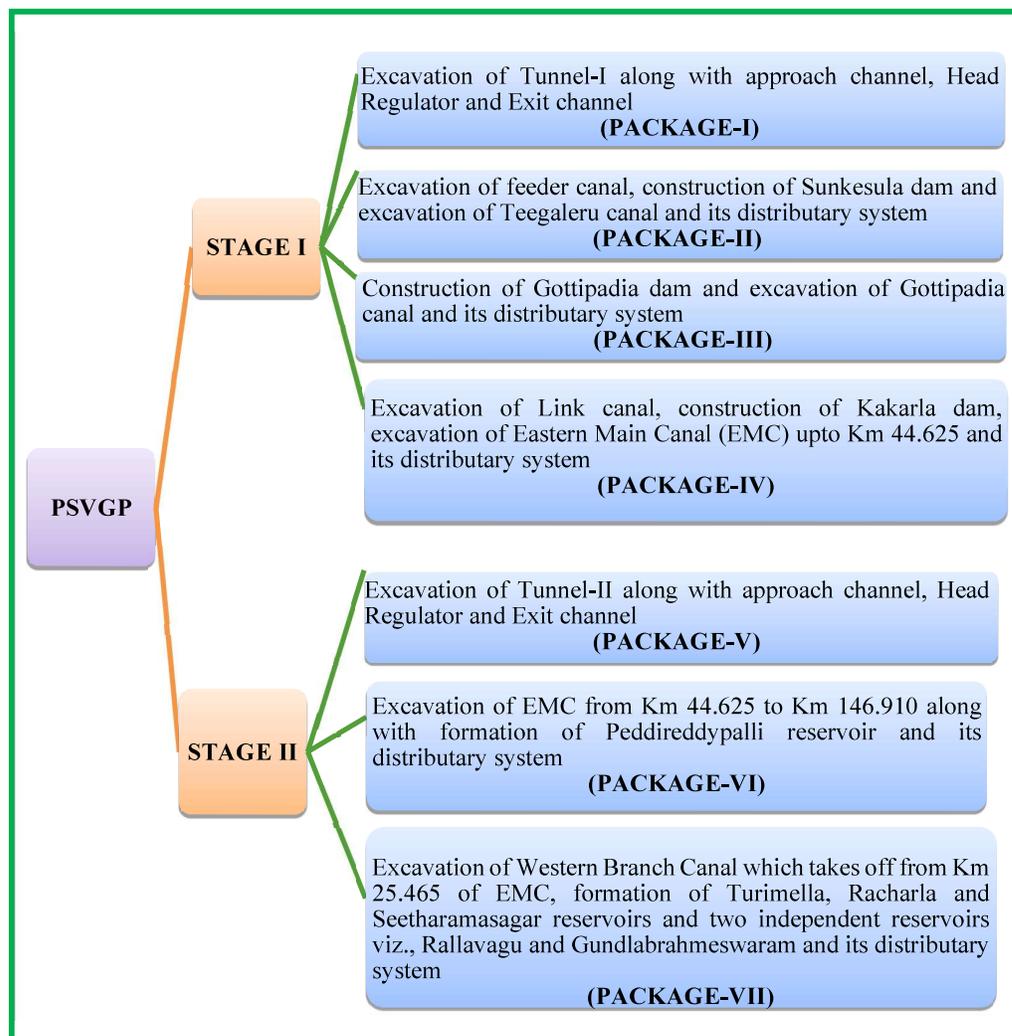
¹ Teegaleru canal: 62,000 acres, Gottipadia canal: 9,500 acres and Eastern Main canal: 3,66,500 acres

² G.O Ms. No. 120 I & CAD Department dated 09.07.2004

³ Tunnel-I: 7.0 m dia and Tunnel-II: 9.2 m dia each having length of about 18.800 Km

⁴ live storage of 43.50 TMC and Dead Storage of 10.35 TMC

Chart 1.1: Showing division of components of works into different stages and packages



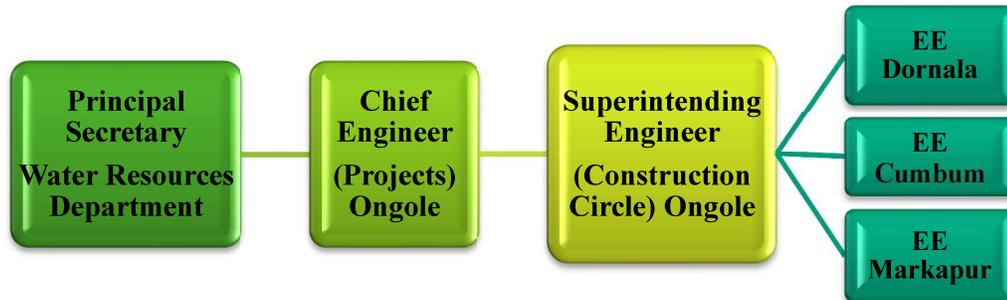
Source: Information furnished by the Department

1.2 Engineering Procurement Construction system of contract

Under Engineering Procurement Construction (EPC) system, the contractors are required to quote a fixed lumpsum price at the time of tendering. For the purpose of cost estimation, the executing department prepares an IBM, to compare with the price bids of the contractors. The selected contractor has the responsibility to survey, investigate and design the components of works, procure all necessary materials, manpower, etc. The Contractor has to execute the components as per designs and drawing approved by the competent authority for various components and deliver it to the employer as per the agreed milestone. The contractor carries the entire risk of the work, as well as budget, in return for a fixed price. The employer would have to define, clearly, (i) scope and specification of the component of work, (ii) quality parameters, (iii) project duration, and (iv) cost.

1.3 Organisational set up

At the Government level, the policies relating to the Water Resources Department are dealt by the Principal Secretary. Project implementation is the responsibility of Engineer-in-Chief, Chief Engineer (Projects), Ongole, Superintending Engineer (Construction Circle, Ongole), Executive Engineers⁵ (EE) at the division level and other functionaries down the line.



1.4 Audit Objectives

The detailed compliance audit of the project was taken up with an objective to assess whether:

1. Tunnel system, head regulator including approach channel were planned and executed effectively for required water drawal capacity,
2. Planning and execution of reservoirs was done with required storage capacity and structural adequacy (*without covering Rehabilitation and Resettlement*), and
3. Canals were designed and executed with adequate structures to create required ayacut (*without covering land acquisition*).

1.5 Audit Criteria

The Audit findings were benchmarked against the criteria sourced from the following documents:

- Public works Department Codes and Manuals.
- Government orders, memos and circulars and various clearances issued by Water Resources Department/ Government/other line departments and relevant International Standard (IS) codes.
- Detailed Project Reports, administrative approvals, technical sanctions, IBMs, tender documents, agreements, payment schedules, bill copies and other correspondence files, etc.
- Minutes of the meetings of IBM/State and District Level sanction committees, High Power committee and correspondence files.

⁵ Veligonda Project (VGP) division Markapur, Investigation Division Cumbum and VGP division Udayagiri at Pedda Dornala

1.6 Audit Scope and Methodology

Audit of 'PSVGP' was carried out during November 2021 to March 2022 covering the period since inception of the project with special focus on execution of works during last four years (2017-18 to 2020-21). The focus was on aspects relating to planning and execution of the project and their financial impact on the overall project. *Land Acquisition (LA) and Rehabilitation and Resettlement (R&R) were not covered during the present audit.* Further, the issues already covered under previous CAG Report (Report No. 2 of 2012 Jalayagnam Report) were not covered during the present audit. All the apex⁶, auditable⁷ and implementing units⁸ were covered during the field audit.

The Audit methodology involved scrutiny of estimates/IBMs, tendering process, agreements entered into (both EPC and LS contract system) with contractors, measurement books, etc., at the Circle/Division level.

During scrutiny of EPC contracts, where quantities estimated by the bidders were available, the same were considered to assess the excess and short fall in actual execution/additional sanctions. However, there were instances where agreements did not provide quantities estimated by the bidder, in such cases IBM quantities were considered for the same and observations were made accordingly.

The reply of the Government received (January 2023) has been suitably incorporated in the Report. An Exit Conference was held (April 2023) during which the audit findings and recommendations of audit were discussed in detail. The audit findings are detailed in subsequent Chapters.

1.7 Acknowledgement

Audit acknowledges the co-operation extended by the Water Resources Department, the Engineer-in-Chief, Chief Engineer, Superintending Engineer and officials of three Engineering Divisions of Veligonda Project in conduct of this audit.

⁶ Principal Secretary, Water Resources Department, Velagapudi

⁷ Chief Engineer, Ongole, Superintending Engineer, Construction Circle, Ongole

⁸ Executive Engineer offices at Cumbum, Dornala and Markapuram