

**CHAPTER 1**  
**WATER RESOURCES DEPARTMENT**

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# CHAPTER 1

## WATER RESOURCES DEPARTMENT

### 1.1 Rehabilitation of Pillowa, Kotwal and Pagara Dams

#### *1.1.1 Introduction*

Pillowa dam (constructed in 1915) across Sank river in District Morena is a composite dam. In addition to its own storage, it uses graduated release of water stored at Kotwal dam (constructed in 1915) and Pagara dam (constructed in 1927) across river Asan, a tributary of Sank river, for irrigation through Bhind main canal. The irrigation from the system was 36830 hectares (ha) in 1991.

A Dam Review Panel (DRP) constituted (1985) by the State Government inspected the dams between 1986 and 1988 and diagnosed that the earth portion of all three dams was in a distressed condition and showed water logging. There was no energy dissipation arrangement at down stream of Kotwal dam. There was leakage of water throughout the dam body and cracks at down stream of the Pagara masonry dam. It recommended their rehabilitation. Technical guidelines were provided by the Central Water Commission (CWC) and the Dam Safety Review Panel (DSRP) constituted (1991) by the State Government.

The Government of MP accorded (1991) administrative approval (AA) for Rs.26.20 crore (Pillowa: Rs.6.75 crore; Kotwal: Rs.6.22 crore and Pagara: Rs.13.23 crore) for rehabilitation of these dams, under “Dam Safety Assurance and Rehabilitation Programme”(Programme) assisted by World Bank for completion by September 1997. An extension for reimbursement of actual expenditure upto September 1999 was granted by World Bank to the State Government.

The rehabilitation programme aimed at (i) assurance of the dam safety and flood control, and (ii) providing irrigation in 55000 ha, as against the existing 36830 ha.

The remedial works package of Rs.20.12 crore to achieve the foregoing objects included, (i) construction of new ogee type radial gated spillway 20 m downstream of the existing Pillowa and Kotwal dams and an additional non-gated spillway at Pagara dam (Rs.16.34 crore), (ii) strengthening of earth portion of all the three dams (Rs.1.59 crore), (iii) grouting of foundation and masonry portion of all three dams and guniting on upstream face of masonry portion of Pagara dam (Rs.1.44 crore), (iv) external electrification of all three dams (Rs.19 lakh), (v) construction of residential and non-residential building for in all three dams (Rs.11 lakh) and (vi) development of roads (all three dams) (Rs.45 lakh). The sequence and time schedule for execution of these items was, however, not laid down.

The work on these dams started in 1991 and an expenditure of Rs.39.76 crore was incurred as of March 2000. The benefits of flood control and irrigation are yet to be achieved as the radial gates of Pillowa and Kotwal dams have not been installed. Scrutiny of the records of the project revealed as under.

The estimates were revised (May 1999) to Rs.55.85 crore (Pillowa: Rs.22.18 crore, Kotwal: Rs.25.43 crore and Pagara: Rs.8.24 crore). The reduction in cost of Pagara dam from Rs.13.23 crore to Rs.8.24 crore was owing to a decrease in length of spillway from 428 m to 244 m. TS from CE and AA of Government to revised estimates were awaited (October 2000).

The Department attributed increase in cost of Pillowa and Kotwal dam works to change of design and rise in price of labour, material and POL. Audit analysis, however, revealed that the cost of Pillowa and Kotwal dams had abnormally increased due to (i) excess payment for over excavation of foundation by the contractor (Rs.2.62 crore) and non-reduction of rates for lower weights of spillway gates (Rs.37.29 lakh), (ii) payment for extra items on higher rates (Rs.6.13 crore); (iii) over payment due to misclassification of strata (Rs.12.04 lakh) and incorrect calculation of escalation (Rs.2.91 crore); (iv) loss due to breach of Pillowa dam as a result of departmental failure in providing protection works (Rs.13.53 lakh); (v) avoidable payment of escalation due to delay in execution (Rs.2.75 crore).

#### ***1.1.2 Over excavation in foundation of ogee spillway of Pagara dam***

Construction of ogee spillway of Pagara dam (PAC Rs.2.54 crore) was awarded (October 1995) on item rate contract for completion by April 1998 at a cost of Rs.3.94 crore. The agreement specified that no payment for excavation beyond the designed level would be made and excess excavation would be refilled with suitable material at the contractor's cost.

**Over excavation in foundation led to over payment of Rs.47.70 lakh**

The contractor excavated 78,866.39 cu m in hard rock, of which 1914.42 cu m was below the designed level. The contractor was paid for the over excavation as well as for refilling it with cement concrete resulting in excess payment of Rs.47.70 lakh.

On this being pointed out, the Engineer-in-Chief (E-in-C) stated (September 2000) that the foundation was slightly lowered as per instructions of the geologist. The reply is not tenable, as the geologist also stated that the foundation was evaluated by him after excavation. He approved the excavated level shown to him and directed removal of loose materials before concreting. The agreement specified that over excavation and refilling were not to be paid for. The SDO had also instructed (May 1997) the contractor that excavation below designed level would be at his risk, which he accepted.

#### ***1.1.3 Excess payment of Rs.2.14 crore for over excavation with blasting***

Construction of ogee spillway of Pillowa and Kotwal dams (PAC Rs.5.37 crore and Rs.4.59 crore respectively) were awarded on item rate contracts to M/s 'A' in January 1996 and June 1996 for Rs.7.99 crore and Rs.6.96 crore for completion in January and June 1999, respectively.

**Over excavation with blasting, not admissible as per agreement, resulted in excess payment of Rs.2.14 crore**

According to the specification drawing provided to the contractor, the foundation in body and cistern of the spillway was to be excavated and refilled with concrete as per levels given below.

Name of dam	Location	Foundation level for excavation	Crust level of cistern with 1 m concrete filling
Pillowa	Dam body	155.67	156.67
	Cistern	155.67	
Kotwal	Dam body	155.92	156.36
	Cistern	155.36	

The excavation in hard rock was to be done without blasting for the safety of the old dams existing at 20 m upstream. The CE, on the contractor's request permitted (December 1997) him to excavate in hard rock with blasting. The CE approved (November 1997) foundation levels of Pillowa and Kotwal dams at 157.25 m and the crust level of cistern in Kotwal dam at 157.36 m. The foundation level of cistern of Kotwal dam with 1 m concrete should have thus been laid at 156.36 m. Filling with concrete in cistern portion from 155.36 m was decided without any recommendation regarding the foundation and concrete thickness by the CWC.

In anticipation of the construction drawing and permission for blasting, the contractor carried out excavation as per specification drawing. This resulted in over excavation of 2236.77 cu m in foundation of Pillowa dam and 6461.405 cu m in Kotwal dam body and cistern. It is not clear whether the over excavation was due to blasting.

The over excavation was filled with concrete. As per agreement the over excavation as well as its filling was at the contractor's cost. Contrary to the agreement, the contractor was paid for the over excavation and its filling. This resulted in excess payment of Rs.2.14 crore to the contractor.

On this being pointed out (March 2000), the E-in-C stated (September 2000) that the excavation deeper than design level was suggested by the Geologist and the work was done as per modified drawing approved by the CE. The Geologist stated (November 2000) that the foundation of Pillowa dam was offered to him after excavation. In case of Kotwal dam, the foundation was offered from time to time and its lowering was recommended in block nos. 8, 9 and 10. In computing the quantities of over excavation, the quantities in block 8, 9 and 10 have not therefore been included.

#### ***1.1.4 Higher rates for extra item of concrete leading to excess payment of Rs.4.69 crore.***

The tender document provided that quantities exceeding those provided in the agreement by more than 30 per cent would be paid for as extra item at the rates agreed upon by the Department and the contractor. After negotiations, the contractor agreed to the prevailing practice of adding the tender percentage to the estimated rates of each item at the time of calling tender to decide the rates for extra items. This formed part of the agreement.

Contrary to this, the Department prepared (1998) higher fresh estimated rates on the basis of USR and added the tender percentage to arrive at the extra rates. The CE made further inadmissible enhancements in the revised rates while recommending them to the Government. These included (i) de-watering charges, not admissible as per agreement, (ii) revision of lead for sand from 65 to 100 km which was also recommended separately as an extra item but was not admissible at all, (iii) lift for form work not provided for in agreement and not admissible as per USR and (iv) revision of rates for foundations by changing that filling from CC to RCC although only 1 per cent reinforcement was provided. The rates sent (March 1999) to Government for acceptance/sanction by the CE are given below.

Sl. No.	Item of Concrete	Estimated rates in 1995	Extra item rates as recommended	Extra item rates as per agreement	Estimated rates prepared in 1998
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**Pillowa dam**

(i)	M-20 concrete in Cistern with metal size 40 mm	948	2113.10	1411.10	1418.95
(ii)	M-20 concrete in Ogee	1095.65	2051.98	1630.87	1377.91
(iii)	M-15 in training wall	859.13	1521.41	1278.81	1021.63

**Kotwal Dam**

(i)	M-20 in cistern	946	2168.35	1436.67	1427.77
(ii)	M-20 in Ogee	1064	2124.84	1615.89	1399.12
(iii)	M-15 in training wall	832.38	1583.40	1264.13	1042.60

**Higher rates for extra items led to excess payment of Rs.4.69 crore**

Excess payment of Rs.4.69 crore at a provisional rate (75 percent of recommended rates) was made without any sanction from the Government.

On being pointed out in Audit (March 2000), the E-in-C stated (September 2000) that the excess payment has been recovered from the pending bill of the contractor.

**1.1.5 Over payment of Rs.2.91 crore to the contractor due to incorrect adoption of price indices.**

**Incorrect adoption of price indices resulted in over payment of Rs.2.91 crore**

As per agreement, price variation was to be calculated taking the average whole sale price index for the quarter preceding the month of opening of the bid as the base. The bid of Pillowa and Kotwal dams were opened in September and November 1995, for which the index was to be based on the quarters April to June 1995 and July to September 1995 respectively. It was, however, noticed that in both the cases, the base index for April 1995 which was lower than the average of April to June 1995 and July to September 1995 was adopted by the Sub-Engineer and SDO. Similarly, instead of adopting the average consumer price index for the quarter under consideration, the index for the month of payment was adopted by the Sub-Engineer and SDO. It was also seen that the provisional index for cement was adopted as 304.3 as against the actual final index of 284.17 from July 1997 onwards. He adopted in both the cases the wrong base even though he was not under direction from his higher authorities for the same. This led to over payment of Rs.2.88 crore to the contractor (Pillowa: Rs.1.54 crore and Kotwal: Rs.1.34 crore).

For construction of Pagara dam, the agreement provided for payment of escalation of 33 percent on material, 22 percent on cement and 5 percent on steel. The division, however, calculated escalation on material at 60 percent. This resulted in over payment of Rs.2.85 lakh to the contractor.

On this being pointed out in Audit (March 2000), the E-in-C stated (September 2000) that the recovery would be made from the next running bill, security deposit and the earnest money of the contractor. No reply has been given regarding recovery from the contractor of Pagara dam.

***1.1.6 Payment at higher rates for work done by cheaper method-excess payment of Rs.1.44 crore.***

Agreements for construction of ogee spillway of Pillowa and Kotwal dams, stipulated that hard rock be excavated without blasting to avoid damage to existing masonry dams, 20 m upstream of the two sites.

**Adoption of higher rates for excavation led to excess payment of Rs.1.44 crore.**

During execution, the contractor requested (January 1997) for excavation with controlled blasting. The CE accorded permission (December 1997), for excavation with light blasting so that the work could be completed by June 1998. The EE prepared (April 1998) rate analysis for excavation in hard rock with blasting<sup>1</sup>, partly at current market price and partly at USR 1991 at Rs.396.84 per cu m for Pillowa dam and at Rs.345.74 per cu m for Kotwal dam against a rate of Rs.160 per cu m, for excavation without blasting. The CE recommended (March 1999), rate of Rs.259.28 and Rs.264.42 per cu m, respectively to Government for sanction. Pending approval, the EE made payment at 75 percent (Rs.298 per cu m and Rs.259.30 per cu m) of the rates recommended by him, on the direction of SE. This resulted in excess payment of Rs.1.44 crore.

When the objection was raised in Audit (March 2000), the E-in-C revised (September 2000) the rates at Rs.162.04 per cum and at Rs.158.70 per cu m and stated that the excess payment of Rs.1.44 crore would be recovered from the pending bill of the contractor.

***1.1.7 Breach of Pillowa dam due to technical failure during construction: loss of Rs.13.53 lakh to Government***

Construction of ogee spillway of Pillowa dam occupied a width of 244 m, leaving a waterway of 40 feet at the left side, which was insufficient for passage of flood water. A guide wall to be constructed on the left of the spillway was not taken up, as the final design/drawing was approved only in November 1999 when 3 rainy seasons were already over.

**Pillowa dam breached due to technical failure resulting in loss of Rs.13.53 lakh**

On 18 August 1999, flood water damaged the existing earth portion of the Pillowa dam. The damage, estimated at Rs.13.53 lakh could have been avoided had an adequate waterway been provided. Even though the repair work has been carried out, the payment was yet to be made.

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<sup>1</sup> Excavation with blasting is a cheaper item in comparison with excavation without blasting.

On this being pointed out, the E-in-C stated (September 2000) that the contractor has given consent in writing to complete the new earth work at his own cost. The reply is not correct as repair of the breached portion costing Rs.10.86 lakh was measured and included in the bill for construction of ogee spillway of Pillowa dam. Payment had not been made as the rates for these items were yet to be decided. Expenditure was also incurred on immediate relief and repair of electric lines. All the expenses were avoidable had the work been done as per specifications.

***1.1.8 Overpayment of Rs.12.04 lakh due to misclassification of strata***

**Contractor was overpaid Rs.12.04 lakh due to misclassification of strata**

During construction of ogee spillway of Kotwal dam, the contractor was paid for excavation of 41,786 cu m in hard rock at Rs.160 per cu m. The EE on a visit to the site (August 1998) observed that the quantity excavated included 12,040 cu m of soft/disintegrated rock payable at Rs.60 per cu m and ordered that the overpayment of Rs.12.04 lakh due to misclassification of strata may be debited against the SDO and five Sub-Engineers responsible. The amount has been debited as "Misc. PW Advance" against the officers but not yet recovered.

On this being pointed out (March 2000), the E-in-C stated (September 2000) in reply that matter was being investigated.

***1.1.9 Proportionate reduction in payment not made for spillway gates of lower than tendered weight***

**Non-reduction in rates for under weight spillway gates led to excess payment of Rs.37.29 lakh**

Notice inviting tenders (NIT) for supply and erection of 21 radial and stop log gates for spillway of Pillowa dam was approved by the CE for Rs.2.13 crore. The lowest tender was for a rate of Rs.8,70,000 for each gate weighing 17.50 MT was accepted and work awarded for a total value of Rs.4.88 crore. The supplier prepared drawings/designs for gates of 14.311 MT each as against the tendered weight of 17.50 MT.

The EE (E&M), Gwalior who inspected the gates (March 1999) stated that the payment be made by weight on pro rata basis. Accordingly, Rs.30.17 lakh was withheld from the contractor's bill. The withheld amount was, however, released as per CE's instructions (July 1999). The Government subsequently directed (September 1999) that the payment be made as per agreement. Non-reduction of rates in proportion to the weight of each gate resulted in excess payment of Rs.37.29 lakh.

On this being pointed out, the E-in-C stated (September 2000) that as per agreement the tenderer was required to indicate the approximate weight of each item for the information of the Department. The contractor was bound to execute the work as per design approved by the Department and no claim was to be entertained for any variation of actual weight. The reply is not correct because the contractor had quoted the weight of each gate in the tender and a proportionate reduction in payment should have been made.

### **1.1.10 Inadequate quality control**

The agreements for construction of ogee spillways of Pillowa, Kotwal and Pagara dams included construction of ogee weir with controlled cement concrete work in M 20 and M 15 mixes as per specification and as directed by the engineer in charge. The specifications, which formed part of the agreement, provided for control of the quantities of cement, aggregate and water by weight were, however, not decided before awarding the works in 1995-96. Specification for M-20 were later approved (August 1999) with a required strength of 382 kg/cm<sup>2</sup> for the Pillowa and Kotwal dams and 333 kg/cm<sup>2</sup> for the Pagara dam. No mix design for M-15 was, however, prepared by the Department or proposed by the contractor.

**Strength of concrete was less than required. No action was taken for rectification of sub-standard work. The contractor used less material valuing Rs.1.58 crore.**

During execution, the strength of the work was found to be as low as 145 to 324 and 185 to 286 kg per cm<sup>2</sup> in respect of Pillowa and Kotwal dams, respectively. The EE, Quality Control, the SE and the CE directed (between October 1998 and December 1999) the EE to take corrective action to bring the strength upto the required level of 382 kg/cm<sup>2</sup>. No such improvement was, however, noticed in the tests-results carried out at later stages of construction. The contractor for Pillowa and Kotwal dams had used less cement and aggregate than that specified in the volume mix, the value of which worked out to Rs.1.58 crore.

The contractor for Pagara dam did not adhere to the approved design mix by weight and maintained records of volume mix only. The strength of the work ranged from 161 to 268 kg/cm<sup>2</sup> against the strength of 333 kg/cm<sup>2</sup>. Payment to both the contractors was made at full rates without any reduction or penalty for substandard work.

On this being pointed out, the E-in-C stated (September 2000) that the design mix by MITS Gwalior was much more than the required strength. The reply is not tenable because the strength mentioned in G-schedule was tentative on the basis of volume mix, while the contractor used the weight mix using less material and thus got undue benefit.

(ii) According to the specifications, 64740 tests of concrete for its compressive strength were to be conducted, but only 977 (1.5 per cent) tests were actually carried out. Thus the quality of masonry structures was not assured.

### **1.1.11 Grouting of Pagara masonry dam- Substandard work**

**High permeability in masonry dam indicated sub-standard work of Rs.1.13 crore.**

Remedial work estimated to cost Rs.75.67 lakh was awarded for Rs.1.41 crore and completed in May 1995 at a cost of Rs.1.13 crore. The work included grouting of the foundation and dam body.

The permeability of the dam ranged from 25 to 269 lugeon in July 1994. The permeability of the dam was again tested (November 1994) after the work was complete and found to be 5 to 91 lugeon against the requirement of 5 lugeon in down stream and 2.5 lugeon in up-stream, indicating substandard work.

The remedial work was taken up with the object of dam safety. The purpose has been defeated due to high permeability noticed after grouting.

On this being pointed out, the E-in-C stated (September 2000) that the grouting of Pagra dam was done only in two rows due to inadequate top width of dam. Besides under these conditions, the results of guniting and grouting are very good since leaking of the dam had now been completely stopped.

The reply is not tenable in view of the high permeability noticed after grouting, indicating substandard work.

#### ***1.1.12 Recoveries at the instance of Audit***

During audit, excess payments aggregating Rs.12.15 crore on account of over excavation, payment at higher rates, incorrect calculation of price escalation and misclassification of strata were brought to notice. The E-in-C's reply (September 2000) indicated recoveries aggregating Rs.9.01 crore would be made from final bill, security deposit and earnest money of the contractors. Payment of 27<sup>th</sup> bill of Kotwal dam and 28<sup>th</sup> bill of Pagara dam indicated that recoveries of Rs.4.69 crore have been made leaving a balance of Rs.4.32 crore.

Details of final bill, security deposit and earnest money have not been mentioned as of October 2000.

#### ***1.1.13 Delay in installation of radial gates***

**Non-erection of radial gates, rendered the expenditure of Rs.39.76 crore as nugatory**

The programme envisaged release of water for flood control and irrigation through the new spillway gates and dismantling of the old existing spillway, which was insufficient to pass flood water. The Pillowa and Kotwal dams remain in an unsafe condition, without any increase in irrigation and flood control due to delay in installation of the gates. The entire expenditure of Rs.39.76 crore remained idle.

Audit analysis revealed that substantial time was taken in finalising the design of the project and in award of contracts resulting in delay of 4 years and 3 months in starting the project. The time taken on the various activities are discussed below:

(i) The CWC and DSRP required (June 1991) technical information relating to flood and flood damages, which was furnished by WRD in March 1992, i.e. after 10 months.

(ii) The CWC finalised the design flood in August 1993 i.e. after one year and 4 months.

(iii) Thereafter, the CE approved the drawing in May 1995 and tenders for major items of work estimated to cost Rs.12.50 crore (out of a total of Rs.20.12 crore) were invited late and agencies fixed between October 1995 and June 1996 further delaying the work by 2 years and 1 month.

(iv) After award (1996) the CE took two years (upto December 1997) to decide the dam foundation.

Had these delays been avoided, the project could have been completed by September 1997, thereby harvesting benefits earlier.

Construction work on this project was started in October 1995 and was scheduled for completion by June 1999. It was still incomplete as of September 2000.

#### ***1.1.14 Conclusion***

Expenditure on the works planned for completion at a cost of Rs.26.20 crore has already exceeded Rs.39.76 crore by March 2000. Delays in execution led to escalation payment of Rs.2.75 crore. Over excavation and incorrect estimation of quantities and rates resulted in excess payment of Rs.9.12 crore. There were overpayments of Rs.3.03 crore and the strength of concrete work was found between 145 to 324 kg per cm<sup>2</sup> instead of 382 and 333 kg per cm<sup>2</sup> specified.

Grouting in the foundation and body of Pagara dam carried at a cost of Rs.1.13 crore proved nugatory in view of permeability ranging between 5 lugeon to 91 lugeon as against the target of 2.5 to 5 lugeon in upstream and down stream, respectively. The objective of safety assurance was thus not met.

The spillway gates were not commissioned and made functional as of March 2000. As a result, the storage of water for irrigation is incomplete. In summary gross mismanagement of the project coupled with inadequate pre-project execution details led to this situation.

The matter was reported to Government in May 2000; reply had not been received (October 2000).

## **1.2 Non-recovery of Government dues from contractor**

### **Amount of Rs.40.01 lakh remained unrecovered since September 1997 from a contractor**

Two contracts for construction of (i) spill channel for Rs.57.73 lakh and (ii) ogee weir of Bandia Nallah Project for Rs.1.37 crore were awarded by the Executive Engineer (EE), Gopi Krishna Sagar Project Division, Guna to contractor 'A' on an item rate basis, for completion by September 1997.

The EE rescinded both the contracts in September 1997 at the risk and cost of 'A' under clause 4.3.3.3 of the agreement with penalty for delays under clause 4.3.2 and awarded the left over works to two other contractors.

The scrutiny of records in audit (February 1998 and December 1999) revealed that Rs.40.01 lakh were recoverable from 'A', as given below.

(i)	Extra expenditure at risk and cost of contractor (clause 4.3.3.3)	Rs.21.44 lakh (Rs.12.71 lakh and Rs.8.73 lakh)
(ii)	Compensation for delay (clause 4.3.2)	Rs.15.54 lakh (Rs.4.62 lakh and Rs.10.92 lakh)
(iii)	Un-recovered balance of mobilisation advance and interest thereon upto to 31 December 1999	Rs.3.03 lakh
	<b>Total</b>	<b>Rs.40.01 lakh</b>

Rs.13.49 lakh (bank guarantee of Rs.10 lakh, earnest money Rs.1.60 lakh and security deposits Rs.1.89 lakh) was available with the Department for adjustment of the dues of 'A'. The EE approached the Zila Sahakari Kendriya Bank Maryadit Morar, Gwalior in November 1997 for payment of bank guarantee. The bank did not pay despite issue of reminders.

On this being pointed out by Audit (February 1998), the EE issued a notice under Section 80 of the Civil Procedure Code in March 1998 for filing a suit against the bank to recover the amount of the bank guarantee. Though the bank guarantee lapsed on 25 March 1998, no further action was taken till the matter was again pointed out by audit in December 1999 whereupon the EE approached the Collector, Gwalior in March 2000 for issue of Revenue Recovery Certificate (RRC) against 'A'. Subsequently, the EE intimated (June 2000) the facts to the Reserve Bank of India and requested for action against the bank.

Lack of effective follow up action by the EE to forfeit the deposits and enforce the bank guarantee through the court of law or to recover the amount through issue of RRC resulted in non-recovery of Rs.40.01 lakh. Further delay may result in the amount becoming irrecoverable.

The matter was reported to Government (February 1999); reply had not been received (October 2000).

### **1.3 Extra cost due to injudicious rejection of tender.**

#### **Injudicious rejection of a valid tender and acceptance of a costlier tender on re-invited bids resulted in avoidable extra cost of Rs.40.92 lakh**

Local competitive bids<sup>#</sup> of drilling, grouting, rocking and pointing work for the construction of Tighra Dam were invited (October 1994) by the Superintending Engineer (SE), Water Resources Circle, Gwalior. The lowest offer (January 1995) of contractor "A" for Rs.79.21 lakh (67.28 per cent above

<sup>#</sup> A system of bidding prescribed by the World Bank for projects funded by it.

the estimated cost of Rs.47.35 lakh\*) was rejected (July 1995) by the Government on the grounds that the contractor did not hold a certificate of no objection (NOC) from the World Bank. It directed the Chief Engineer (CE) to re-invite the tenders after amending the pre-qualification criteria to include a condition regarding holding of NOC. Contrary to this, tenders were re-invited (August 1995) without change of pre-qualification criteria. The lowest offer of contractor "B" for Rs.1.20 crore was accepted (March 1996) by the Government. 'B' also did not hold an NOC and obtained it from the World Bank only in September 1996.

It was observed in audit (November 1997) that the tender of 'A' recommended (February 1995) by the CE for acceptance was rejected by the Government though 'A' was eligible and fulfilled the conditions of the NIT. Moreover, the work was awarded to 'B' at an extra cost of Rs.40.92 lakh without obtaining NOC from the World Bank. Thus, injudicious rejection of tender had delayed the award of work by an year and resulted in an avoidable extra cost of Rs.40.92 lakh at the stage of tender acceptance. The extra cost would further increase during execution.

On this being pointed out, the Executive Engineer stated (November 1997) that facts were reported to Government who had rejected the tender considering all the aspects.

The matter was reported to Government (March 1999); reply had not been received (October 2000).

#### **1.4 Unfruitful expenditure due to defective construction**

**The expenditure of Rs.30.06 lakh (Rs.11.74 lakh on construction and Rs.18.32 lakh on maintenance) proved wasteful as the scheme yielded meager irrigation of 82 acres per annum against the full potential of 1950 acres.**

Estimates of Rs.50.97 lakh for renovation of the Parasi Lift Irrigation Scheme (LIS) submitted to the Government by the CE in February 1999 were returned (March 1999) with instructions that the items of work within the competence of the CE/Engineer-in-Chief (E-in-C) be completed from the budget for regular repairs and maintenance. No funds for renovation were provided either by the Government or the E-in-C/CE. The scheme provided irrigation to an average area of 82 acres per annum, which was even less than 5 percent of the designed potential of 1950 acres. Expenditure of Rs.30.06 lakh (Rs.11.74 lakh on completion of the scheme in 1978-79 and Rs.18.32 lakh on wages and electricity charges upto September 2000) incurred on the scheme largely proved wasteful.

\* Actually estimated cost was Rs.47.35 lakh and was considered in comparative statement of tenders.

Audit scrutiny revealed that the abnormal shortfall in irrigation was attributable to construction defects, improper shape of distribution chamber in which cracks had developed in the side walls, leakage in the joints of CI rising mains, which were noticed by EE Water Resources Division, Pendra Road in October 1981 and also by SE during inspection in August 1986, apart from installation of pumps of 225 HP instead of 325 HP and transformer of 110 KVA instead of 325 KVA.

On this being pointed out, the CE, Hasdeo Basin, Bilaspur admitted the facts and stated that the defects would be rectified to achieve the targeted irrigation as and when funds are released.

The matter was reported (March 2000) to Government, reply had not been received (October 2000).

## **1.5 Construction of Chaldu Tank**

**Work on earth dam of Chaldu Tank was suspended in December 1993 rendering the expenditure of Rs.2.52 crore incurred on it nugatory. Machinery advance and interest of Rs.22.52 lakh thereon remained unrecovered.**

Government accorded (January, 1986) administrative approval for construction of Chaldu Tank in Malharganj Tehsil of Mandsaur district at a cost of Rs.7.93 crore to irrigate 4900 acres of land. Rs.2.52 crore were spent on the scheme upto December 1998, when it was suspended for want of further funds. Government posed (April 1997) 325 incomplete irrigation schemes to NABARD for loan of Rs.534.41 crore to complete the same, but the Chaldu Tank was not included therein. Funds were also not allocated for completion of the work under the VIIIth and subsequent Five Year plans.

No work had been executed on the earth dam since December 1993, which was exposed to the hazard of being washed out and silted up with the passage of time with a consequent loss of Rs.1.92 crore.

Construction of earth dam from distance 900 to 2760 m estimated to cost Rs.3.59 crore was awarded (5 June 1992) to a contractor 'A' for completion within 36 months i.e. by 4 June, 1995 at a cost of Rs.2.10 crore. The contractor was paid a mobilisation advance of Rs.10 lakh in October 1992. He was also paid a machinery advance of Rs.21 lakh in September 1993 despite having stopped work in June 1993. Extensions were granted for completion of the work up to June 1997 but the EE, WR Division, Mandsaur foreclosed (10 December 1996) the contract under clause 4.3.14 due to paucity of funds.

Clause 3.23.4 of the agreement provided that recoveries along with interest at 14 percent per annum be made in equal installments from the first bill after payment of the advance to the last but one bill. Against Rs.31 lakh recoverable towards the advances, Rs.17.80 lakh was recovered (December 1998) from the

running bills. The remaining dues of Rs.22.52 lakh (principal Rs.13.20 + interest Rs.9.32\* lakh) had not been recovered (September 2000), either by auction of the hypothecated machinery, which was in possession of the Department since September 1993 or by issue of RRC. The amount may become irrecoverable with the passage of time.

The EE admitted (April 2000) the non-recovery of Rs.22.52 lakh and stated that the hypothecated machines were available with the Department. The reply is not tenable as the machinery was old (of 1985 make) and deteriorating in value and may not yield the amount recoverable, which is increasing with increase in interest as a result of delay in recovery.

Matter was reported to Government (August 1998); reply had not been received (October 2000).

## **1.6 Non-recovery of interest on Machinery Advance**

**Machinery advance and interest of Rs.13.45 lakh was not recovered from a contractor. Injudicious withdrawal of the work and award to another contractor at higher rate resulted in avoidable extra cost of Rs.1.21 crore.**

Contractor 'A' was awarded (May 1991) the work of construction of syphon aqueduct across river Orr at km 28.05 of Rajghat Left Bank Canal (LBC) for Rs.2.70 crore for completion in 24 months i.e. by May 1993.

'A' had, however, executed the work of Rs.1.55 crore only upto 38th running bill paid in July 2000. Four extensions, taking the period of completion upto 31 July 1998, were granted for reasons mainly attributable to the Department as detailed below:

- (i) delay in acquisition of land (till March 1994),
- (ii) handing over of the revised drawing to the contractor (November 1994),
- (iii) paucity of funds, and
- (iv) delay in fixing of grouting agency (March 1996).

'A' applied (25 June 1998) for a fifth extension, which was refused on the grounds that Orr Aqueduct was the most critical structure of the LBC without which completion and creation of irrigation facilities for 19961 hectares would be held up. The remaining work, estimated to cost Rs.1.15 crore was withdrawn (November 1998) from 'A' to expedite execution.

The remaining work alongwith additional items was entrusted to another contractor 'B' only in March 2000, after a lapse of 15 months, at a cost of Rs.3.37 crore. The lapse of 15 months in engaging 'B' defeated the very purpose of withdrawing the work from 'A', viz. expeditious creation of

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\* Inclusive of interest on mobilisation advance.

irrigation facilities. Moreover, it entailed in an avoidable extra cost amounting to Rs.1.21 crore.

Scrutiny revealed (September 1998) that out of Rs.20.81 lakh paid as machinery advance to 'A', recovery of Rs.18.72 lakh only was done. Interest of Rs.11.36 lakh was also chargeable and recoverable. The department did not, however, recover the interest on advance on the ground that during extension period no interest need to be charged. The view taken was contrary to the rules.

On this being pointed out in audit, the EE stated (July 2000) that a decision on recommendation (June 1998) for waiver of recovery of interest was awaited from the Government.

The matter was reported to Government (May 2000); reply had not been received (October 2000).

### **1.7 Non-recovery of extra cost on construction of main canal of Rampura Khurd Project**

#### **Extra cost of Rs.14.32 lakh was not recovered from the defaulting contractor even after two years of completion of work.**

The earth work and lining in chainage 0 to 50 of main canal of Rampura Khurd Project in Tehsil Ashta of Sehore District was entrusted (December 1989) by the EE, Water Resources Division, Sehore to contractor 'A' for completion by 7 November 1990 at a cost of Rs.13.58 lakh. The work was delayed and extension upto December 1992 was sanctioned (October 1992) by the SE, Betwa Circle, Bhopal under penal clause. After executing work of Rs.5.06 lakh (paid in January 1992) 'A' abandoned it. The contract was rescinded (January 1993) at the risk and cost of 'A'.

On re-tendering the part balance work in September 1993, the lowest offer of contractor 'B' for Rs.18.87 lakh (March 1994) was rejected (June 1994) by the CE, Chambal Betwa Basin, Bhopal as being too high. The work was again put to tender (August 1994) and the lowest offer of contractor 'C' for Rs.24 lakh was accepted (October 1996) by the SE. The rejection of 'B's offer not only delayed the completion of the work but also led to an extra cost of Rs.5.13 lakh. Although, the work was completed in June 1998 and the seventh running bill for Rs.22.57 lakh was paid (March 1998), the EE has not calculated the extra cost recoverable from 'A'.

Scrutiny revealed that an estimated extra cost of Rs.14.32 lakh and compensation of Rs.0.33 lakh for extension of time was to be recovered (April 2000) from contractor 'A'. Against this, only Rs.0.25 lakh were available with the Department as security.

On this being pointed out, the EE replied that the delays in execution were mainly due to insufficient allotment of funds and now the work had been completed (30 June 1998). The final bill was awaited (April 2000) and final position of extra cost would be worked out at the time of finalisation of the accounts. The reply is not acceptable, as the Collector was approached for recovery of dues in July 1997. Despite the completion of the project (30 June 1998), the final figure of recovery has not yet been calculated.

The matter was reported to Government (September 1998); reply had not been received (October 2000).