CHAPTER 2

COMPLIANCE AUDIT

Compliance Audit of the Economic Sector departments, their field formations as well as that of the autonomous bodies brought out several instances of lapses in management of resources and failures in the observance of regularity, propriety and economy. These have been presented in the succeeding paragraphs:

COMMERCE AND INDUSTRIES DEPARTMENT

2.1 Loss due to injudicious decision to refund deposited amount

Karnataka Industrial Areas Development Board (KIADB) injudiciously refunded ₹ 17.26 crore to a Company which requested for de-notification of lands after taking its possession though rules prohibit such de-notification. KIADB has to bear additional liability of ₹ 26.83 crore without recourse.

KIADB acquires land for formation of industrial areas for development of industries and also functions as an agency for acquisition of lands for Single Unit Complexes (SUC) based on the clearance given by the Government. For SUCs, KIADB acquires the lands identified by the project proponents and an agreement is concluded with them.

Government approved (May 2008) the proposal of M/s Bannari Amman Sugars Limited (Company) to establish a sugar factory and power generating unit at Modahalli village of Kollegal taluk as SUC, involving investment of ₹ 200 crore. The Company deposited ₹ 21.63 crore[6] between June 2009 and October 2010 with KIADB for initiating land acquisition proceedings. KIADB acquired 413.33 *acres* of land that had been identified by the Company after issuing (April 2010) final notification for acquisition of land under Section 28(4) of KIADB Act and issued Possession Certificate during January 2011.

The Company represented (May 2011) that Government had declared (January 2011) Biligiri Ranganatha Hills Wildlife Sanctuary (BR Hills) as BRT Tiger Reserve and the land acquired there cannot be used for industrial purposes as per Supreme Court orders, as they were situated within a radius of 1.5 km of the Tiger Reserve. Hence, the Company requested KIADB to de-notify 332.92 *acres*[7] of land and to refund ₹ 17.26 crore. As no decision was taken by KIADB, the Company represented (December 2011) to Minister

[6] Inclusive of ₹ 1.91 crore payable to KIADB towards service charges at 10 *per cent*
[7] Excluding 80.41 *acres* for which land compensation was paid to the land owners

for Medium and Large Scale Industries. The Principal Secretary, Commerce and Industries Department, directed (May 2012) KIADB to take action to de-notify the lands as per General Clauses Act, 1897 and refund the amount. Based on the same, KIADB refunded (May 2012) ₹ 17.26 crore to the Company without denotifying the land.

The Hon'ble High Court in writ petition filed (November 2011) by several land owners directed (June 2012) KIADB to disburse additional land compensation to the petitioners. KIADB paid ₹ 4.99 crore[8] to those land owners and demanded (October 2012) refund of the same from the Company. The Company turned down the demand (October 2012) of KIADB. The writ appeal by KIADB to direct the Company to re-deposit the refunded amount was dismissed (March 2013) by the High Court, which observed that the amount should not have been refunded to the Company under any circumstances. The Company, however, agreed (February 2014) to refund the amount on the condition that absolute sale deed[9] to be provided for lands transferred. KIADB did not accept the condition as they can sell land only for industrial purpose. KIADB demanded (December 2015) the land compensation of ₹ 17.97 crore[10] from the Company.

Scrutiny of records revealed the following:

- Indian Board for Wildlife in the meeting on 'Wildlife Conservation Strategy" held during January 2002 envisaged that lands falling within 10 km of boundaries of National Parks and Wildlife Sanctuaries should be notified as eco-sensitive zone as per provisions of the Environment Protection Act, 1986. State Governments (SGs) suggested that delineation should be site specific which was accepted by the Ministry of Environment and Forests (MoEF) during March 2005. As per Supreme Court orders (December 2006) to give opportunity to SGs to send their proposals, MoEF reminded (February 2011) all SGs to forward site specific proposals for declaration of eco-sensitive zone. However, it was observed that Modahalli village was not included in the draft notification of eco-sensitive zones issued (August 2016) by MoEF. Hence, the Company's contention (May 2011 and December 2011) that the position had changed and that it cannot undertake industrial activity due to declaration of an existing 'BRT Wildlife Sanctuary' as 'Tiger Reserve' was not factually correct;

- KIADB had not only taken possession of the land but had also handed over the land to the Company and thus acquisition proceedings had been completed in all respects. As per General Clauses Act, 1897, powers to

[8] Paid during October 2013 and July 2015
[9] In absolute sale deed, the allottee can utilise the land for any purpose
[10] ₹ 7.18 crore for 93.11 *acres* of land based on the Court orders and ₹ 10.79 crore for 239.81 *acres* land in balance cases without calculating interest plus service charges

cancel the notification can be exercised before taking possession of land by KIADB. Thus, there was no scope for de-notification in this case and the direction issued by the Principal Secretary to de-notify lands and refund the amount was improper and unwarranted;

- The lands were identified by the Company to establish SUC and acquisition was made exclusively according to their requirements. There was no provision in the agreement to refund the amount after issue of final notification under Section 28 (4) of KIADB Act. KIADB refunded the deposited amount in violation of the agreement;

- The overall amount of ₹ 21.63 crore initially paid by the Company was inclusive of service charges amounting to ₹ 1.91 crore. Out of this, only ₹ 39 lakh were adjusted and service charges amounting to ₹ 1.52 crore were refunded which was improper, as KIADB had rendered requisite and necessary services and handed over the possession of land.

The refund of deposited amount to the Company after transfer of title was illegal which proved costly to KIADB as it is now saddled with the liability of payment of land compensation from its own resources to the tune of ₹ 26.83 crore[11] (as of June 2016) and the liability will keep on increasing due to interest payable. The refund by KIADB has put the Company in an advantageous bargaining position to dictate terms by insisting upon absolute sale deed for returning the amount. Besides, the irregular refund of service charges resulted in loss of ₹ 1.52 crore.

The matter was referred to the Government in June 2016; their reply is awaited (December 2016).

2.2 Loss due to allotment of industrial land at lower rate

Karnataka Industrial Areas Development Board allotted additional land to a Company abutting the existing land which had already been allotted to other entrepreneurs/firms and sustained loss of ₹ 13.80 crore by not charging at prevailing allotment rate.

Karnataka Industrial Areas Development Board (KIADB) acquires land and develops them into industrial plots. Subsequently, allotments are made for industrial purposes based on the rates prevailing at the time of allotment by KIADB or as per concessional orders issued by Government. The approval by the State High Level Clearance Committee (SHLCC) is mandated for clearance of projects, with investments of ₹ 50 crore or more.

[11] ₹ 7.18 crore compensation already paid + ₹ 19.65 crore towards 15% interest per annum on ₹ 10,79,21,250 from 10.01.2011 to 30.06.2016

KIADB allotted (January 2012/May 2012) 35 *acres* of land in Narasapura Industrial Area (NIA) to M/s Scania Commercial Vehicles India (P) Limited, (Company) at a tentative allotment rate of ₹ 85 lakh per *acre* prevailing at the time of allotment. SHLCC further approved (August 2013) allotment of additional 30 *acres* of land for future expansion activities and Government issued (September 2013) orders for allotment of land abutting the existing land to the Company. The allotment rate was revised[12] (November 2014) to ₹ 1.31 crore per *acre* by KIADB**.** However, KIADB allotted (27 March 2015) the additional 30 *acres* of land to the Company at the previously allotted rate of ₹ 85 lakh per *acre* as against the allotment rate of ₹ 1.31 crore per *acre* applicable for fresh allotment. The Company remitted ₹ 25.50 crore as demanded by the KIADB and lease agreement was executed with the Company during September 2015.

Scrutiny of records (October 2015) of KIADB revealed the following:

- No allotable land abutting the existing land allotted to the Company was available, as these industrial plots had already been allotted to 28 entrepreneurs/firms. KIADB decided (November 2014) to allot alternative land to 28 allottees to accommodate the request of the Company instead of apprising the Government about non-availability.

- As per the original layout plan of NIA (August 2010), out of 653.12 *acres,* industrial plots constituted 370.82 *acres* and the remaining area was earmarked for park and open area (104.01 *acres*) and other civic amenities in conformity with MoEF[13] guidelines. As alternative industrial plots in NIA were not available, the layout plan was modified (July 2013) to increase the area of industrial plots (410.34 *acres*) by primarily reducing the area earmarked for park and open area (71.30 *acres*) and in other components. The layout plan was revised only to accommodate Company's request for allotment of additional land adjacent to the existing land. The revision was not in accordance with MoEF guidelines.

- The concessional rate of allotment to a Company could be applied only when specified by SHLCC and accepted by the Government. However, no such concession was granted by SHLCC while approving expansion proposals of the Company.

Thus, the action of KIADB in allotting 30 *acres* of land at the pre-revised rates resulted in loss of ₹ 13.80 crore[14] to the KIADB.

The matter was referred to Government in March 2016; their reply is awaited (December 2016).

[12] Board Meeting (11 March 2015) decided that enhanced allotment rate would be applicable to the fresh allotments.
[13] Ministry of Environment and Forests, Government of India
[14] 30 *acres* × ₹ 46 lakh per *acre* (₹ 1.31 crore – ₹ 0.85 crore) = ₹ 13.80 crore

2.3 Loss due to allotment of alternate land at reduced price

Karnataka Industrial Areas Development Board sustained a loss of ₹ 7.98 crore on allotment of alternate land at a reduced price without concurrence of the Government.

Section 28 of Karnataka Industrial Areas Development Board (KIADB) Act, 1966 enumerates various stages involved in the acquisition of land for development of industrial area for allotment to entrepreneurs. State High Level Clearance Committee (SHLCC) is the competent authority[15] for clearance of projects costing ₹ 50 crore or above. The clearance would *interalia* include details of nature of project, total investment cost, extent of industrial land to be allotted, name of the industrial area, concessions, incentives admissible, *etc*. Government accords approval to the project based on such clearance of SHLCC. The entrepreneur, thereafter, applies to KIADB for the allotment of land.

SHLCC gave (January 2011) clearance for establishment of "surface coating unit" by M/s KAPCI Coatings India (P) Limited (Company) at an investment of ₹ 55 crore. Government approved (February 2011) the project and directed KIADB to allot 20 *acres* of land at Harohalli Industrial Area (HIA) – 2nd Phase subject to availability of land. The Company scaled down its requirement to 12 *acres* of land and requested (July 2011) for allotment of the same. KIADB issued allotment letter (July 2011) for 12 *acres* of land in plot No.313, 314 and 318-Part (corner plot) in 2nd phase of HIA at the rate of ₹ 60 lakh per *acre.* The Company paid (July 2011/January 2012) ₹ 7.50 crore (including ₹ 30 lakh towards corner plot charges) for the land. Confirmatory Letter of Allotment was issued to the Company in February 2012.

KIADB could not hand over possession of land to the Company for over two years as 2.5 *acres* of the total land allotted to the Company was not handed over by the Revenue Department to KIADB. The Company requested (April 2014) for allotment of alternate land at no extra cost and KIADB approved (28 April 2014) allotment of 12 *acres* of land at Obadenahalli Industrial Area (OIA) on the condition that the Company should obtain approval from SHLCC for change of location. The allotment rate at OIA was ₹ 1.29 crore per *acre* against ₹ 60 lakh per *acre* was charged from the Company. The possession of land was given and lease cum sale agreement was executed with the Company in May 2015.

Our scrutiny revealed the following:

- Land required for formation of industrial area included Government land which had been only partially transferred by the Revenue Department to KIADB. Despite not being in possession of the entire extent of 12 *acres*

[15] Karnataka Industries (Facilitation) Act, 2002

of land and without obtaining approval from Government, KIADB allotted the land and received payment towards land cost. The non-availability of land was not reported to the Government/SHLCC for cancellation of allotment. The omission had resulted in accepting the payment made by the Company just five days before the expiry of due date.

- As the allotted land was not available, alternate land at OIA was allotted at the rates collected for HIA. The allotment rate for OIA was fixed after considering the cost incurred by KIADB in land acquisition and development charges. As KIADB is operating on no-loss no-profit basis, allotment of land at lesser rates resulted in loss to KIADB.

- Any modification to SHLCC clearance requires prior approval. In this case, extent of land as well as industrial area, as approved by SHLCC, had undergone changes. However, KIADB allotted 12 *acres* in alternate industrial layout without following due procedure and instead directed the Company to obtain approval from SHLCC which was yet to be obtained (December 2016). The action of the KIADB was irregular and tantamount to assuming powers of higher authority.

Thus, allotment of land which KIADB did not possess and consequent allotment of alternate land at lesser rates without concurrence of Government was not only irregular but resulted in loss of ₹ 7.98 crore[16] to KIADB.

The matter was referred to Government in March 2016; their reply is awaited (December 2016).

FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

2.4 Unfruitful expenditure on installation of EWPOS machines

Faulty planning and installation of EWPOS machines resulted in unfruitful expenditure of ₹ 11.52 crore.

In order to overcome the drawbacks of the manual system of maintaining accounts in respect of subsidised commodities distributed to card holders at Fair Price Shops (FPS) and to provide subsidised commodities to the right person at the right price without any human intervention, Food, Civil Supplies and Consumer Affairs Department (Department) decided (December 2011) to install EWPOS machines[17] at all FPS. EWPOS machine was envisaged as a combination of Electronic Weighing machine and a Point of Sale device with the ability to store particulars of card holders such as names, biometrics and

[16] ₹ 1.29 crore × 12 *acres* = ₹ 15.48 crore - ₹ 7.50 crore = ₹ 7.98 crore
[17] Electronic Weighing – cum – Point Of Sale machines

family wise entitlement of commodities. EWPOS were to receive data from the central server regarding the stock received by the FPS from wholesale go down and periodically transfer sale invoice or bill data to the central server maintained by National Informatics Centre through a GSM[18] modem. The finger prints of the family members in the ration card available with the Department would be stored in the EWPOS machines for verification of beneficiaries.

The Department planned to implement the scheme in phases and issued purchase orders for 6,149 machines (₹ 31.04 crore) of which 3,866 (₹ 19.27 crore) were supplied and an amount of ₹ 11.52 crore was paid (March 2016) to the agencies.

Scrutiny of records at the office of the Commissioner of the Department revealed that only 25 *per cent* of the EWPOS machines (968 out of 3,866 as of April 2016) installed were transferring the data to the central server which too was incomplete as the details of commodities issued in offline mode, daily stock position, lifting, *etc.*, were not being communicated. During September 2016, only 361 machines were communicating the details to the central server. The entire expenditure of ₹ 11.52 crore was rendered unfruitful due to lapses in planning and implementation of the project as discussed below:

- The technical specification of the EWPOS machines was finalised without considering the data of the ration card holders available with the Department. The biometrics for around 70 lakh pre-2010 permanent ration cards was not available in the database; those available with the Department were in *Secugen* format whereas the EWPOS machines were not compatible with this format. To tide over this problem, the Department initiated the collection of finger prints of beneficiaries at FPS concerned. However, the process was carried out without the supervision of departmental officers and hence the possibility of bogus enrolments cannot be ruled out.

- An agreement was signed with an agency on 5 April 2012 for supply and installation of 1,000 machines. As per the agreement, the agency was to supply 100 machines initially and work order for balance was to be issued only on satisfactory performance of the installed machines. But work order was issued on the same day (5 April 2012) for supply and installation of three machines within Bengaluru on pilot basis. Further, without ensuring the performance of the pilot machines, work order was issued (10 April 2012) for supply and installation of 100 machines in Tumakuru district.

  Without assessing the performance of the 103 machines installed, the Department issued work orders (29 August 2012) for purchase of the

[18] Global System for Mobile Communications

balance 900 machines. Supply order for an additional 250 machines was also issued (20 October 2012) to the same agency on the same terms and conditions. But the machines installed were not able to exchange data with the central server due to various reasons such as data type incompatibility, non-availability of finger prints of the beneficiaries, non-availability of network connectivity, lack of battery backup in case of power failures, *etc.* The purpose of introduction of EWPOS was to have a real time control over the issue of commodities to the actual beneficiaries and also to obtain the stock position at the end of the day. This could not be achieved as there was no transfer of data from EWPOS;

- Though the Department was aware that the machines supplied in the first phase were not functioning properly for several reasons, tenders were invited (November 2012) for supply of EWPOS machines to four districts in the second phase and work order for 4,896 machines was issued (December 2012, February 2013) to two agencies;

- As the EWPOS machines were installed for preventing pilferage of subsidised commodities at the FPS, co-operation of FPS owners was necessary. The agencies in several cases blamed the FPS owners for not keeping the battery energised for charging. The cost of EWPOS machines, charges towards consumables, connectivity charges and annual maintenance charges were to be borne by the Department. Hence, it should have been ensured that FPS owners were made responsible for effective functioning of EWPOS machines but no mechanism was evolved to secure their co-operation.

- The agencies cited lack of mobile connectivity in villages as the reason for not transferring the data to the central server. Connectivity through ADSL[19] modem could have been provided, even if somewhat belatedly, as instructed by the Commissioner (Circular dated 15 July 2013). But the Department did not take any action to improve connectivity for transfer of data to the central server.

- The FPS owners were permitted to issue commodities in the offline mode when problems in EWPOS were encountered such as non-recognition of finger prints, lack of connectivity, *etc* in cases where EWPOS were otherwise fully functional. Thus, verification of the identity of the beneficiary was left to the FPS owners and defeated the very objective of installing EWPOS machines *i.e.* providing subsidised commodities to the *right* person at the *right* price without any human intervention.

- Karnataka Government (Transaction of Business) Rules, 1977 require that any procurement above ₹ five crore should be done only after cabinet approval. Though purchase orders were issued for ₹ 31.04 crore, cabinet approval was not obtained.

[19] Asymmetric Digital Subscriber Line

Thus, poor planning, hasty implementation, lack of measures to ensure maintenance of machines by FPS owners and lack of connectivity affected working of EWPOS machines rendering expenditure of ₹ 11.52 crore largely unfruitful, which was moreover incurred without appropriate approval.

The matter was referred to Government in June 2016; their reply is awaited (December 2016).

FOREST, ECOLOGY AND ENVIRONMENT DEPARTMENT

2.5 Short assessment of Net Present Value and penalty

Department failed to monitor the leased area thereby allowing the lessee to install excess windmill towers in violation of Forest Conservation Act. Department also short assessed Net Present Value and penalty amount by ₹ 2.22 crore.

As per guidelines issued by Ministry of Environment & Forests, Government of India (MoEF) under Forest (Conservation) Act, 1980 (FC Act), clearance for diversion of forest land is given in two stages. In Stage-I, in-principle clearance is given listing out the terms and conditions and in Stage-II, clearance is given after receipt of report from the State Government regarding compliance with the stipulated conditions.

The lease period of diversion of 19.94 hectare (ha) of forest land to M/s Nuziveedu Seeds Limited, Hyderabad[20] (lessee) for installation of 17.25 MW Wind Power Project had expired by March 2013. The agency applied for renewal of lease for a further period of 30 years. An Inspection Team from MoEF which visited (December 2013) the lease area noticed that the lessee had unauthorisedly utilised 19.42 ha of forest land in addition to the leased area of 19.94 ha. MoEF accorded (May 2015) Stage-I approval for renewal of lease period for diversion of 37 ha of forest land including 19.42 ha encroached by the lessee, subject to payment of Net Present Value (NPV) with compound interest and two times the NPV as penalty in respect of excess utilisation of forest land. The Deputy Conservator of Forests, Davanagere (DCF) issued (January 2016) demand notice to lessee for payment of ₹ 5.30 crore. This had not been paid by lessee till the end of June 2016.

Scrutiny of records (July 2015) of Principal Chief Conservator of Forests (Head of Forest Force), Bengaluru (PCCF) revealed inadequate monitoring by DCF and short assessment of demand as discussed below:

[20] Subsequently renamed as M/s NSL Renewable Power Private Limited

- As per the conditions stipulated by MoEF for Stage-I approval, NPV at full rate, along with compound interest at 12 *per cent* per annum on the same from the date on which the amount became due till the date of realisation was to be collected. The DCF, however, adopted wrong NPV rate and area while working out the dues. Against NPV of ₹ 5.80 lakh per ha and 37 ha area to be adopted as per the MoEF conditions, the DCF adopted NPV of ₹ 4.38 lakh per ha and lease area of 19.94 ha which resulted in short assessment of dues by ₹ 1.67 crore.

- As per the conditions prescribed by MoEF, penalty shall be levied at twice the NPV rates for the excess area utilised. At twice the rate of NPV for additional area of 19.42 ha, the penalty works out to ₹ 2.25 crore against ₹ 1.70 crore worked out by the DCF (DCF adopted incorrect rate of ₹ 4.38 lakh per ha as NPV). The short assessment works out to ₹ 55.15 lakh;

- As per the lease agreement, Assistant Conservator of Forest or Range Forest Officer concerned should keep a close vigil over the leased area to ensure that all the conditions are scrupulously followed without any deviation. The lease conditions provided for cancellation of lease in case of violations by the lessee. Though the lessee had violated the FC Act, 1980 by unauthorisedly occupying additional 19.42 ha, no action was taken by the Department for cancellation of the lease. A forest offence case was booked only in April 2014 *i.e.,* after the expiry of lease period. Further, though the MoEF had sought (May 2015) action taken report from the State Government against the officials who permitted illegal use of forest land, no report was sent by the State Government. The agency had utilised additional area from 2004 but Department took cognizance only during January 2015 and had stated that the user agency was not co-operating from the beginning. The contention was not acceptable as violations were within the knowledge of the Department and even though agency was not co-operating, the Department failed to take any action.

Thus, the actions of the Department were tantamount to showing undue favour to the lessee. The adoption of incorrect area and rate of minimum NPV resulted in short assessment of NPV and penal NPV charges amounting to ₹ 2.22 crore[21], while laxity in monitoring allowed the lessee to operate beyond the leased area in violation of FC Act/conditions of lease.

On this being pointed out, the Government stated (September 2016) that action was being taken to issue additional demand notice to the user agency and proposal for initiating departmental enquiry against the officials who had permitted illegal utilisation of forest land had been called from PCCF. Details of progress made in this regard are awaited.

[21] ₹ 1.67 crore (short assessment of NPV) + ₹ 55.15 lakh (short assessment of penal NPV) = ₹ 2.22 crore

PUBLIC WORKS, PORTS AND INLAND WATER TRANSPORT DEPARTMENT

2.6 Planning and execution of works under Central Road Fund

Highlights

1. **Road improvement proposals were forwarded to Central Government without due assessment of needs and prioritisation for sanction under Central Road Fund.**
2. **Government of Karnataka did not allocate funds as committed to Central Government which adversely affected the progress of works.**
3. **Indian Road Congress guidelines were not followed in preparation of project reports and sanction of estimates lacked relevant inputs.**
4. **In 36 works, re-construction from sub-base was unwarranted as the report accompanying to estimates indicated surface defects and extra financial implication worked out to ₹ 30.42 crore. In 20 works, existing bituminous layer was unnecessarily removed and fresh layer was laid involving avoidable extra expenditure of ₹ 32.19 crore.**
5. **Funds allocated for quality control were not transferred to the Regional Officer.**

2.6.1 Introduction

Central Road Fund (CRF) is a non-lapsable fund created under Section 6 of the Central Road Fund Act, 2000 out of *cess*/tax imposed by the Government of India (GoI) on the sale of Petrol and High Speed Diesel to develop and maintain National Highways (NH), State Roads (particularly those of economic importance and which provide inter-state connectivity), Rural Roads, Railway under/over bridges, *etc*. The *cess* collected is initially credited to the Consolidated Fund of India and the balance amount, after adjusting for the cost of collection is transferred to CRF which is distributed amongst three ministries *i.e.* Ministry of Rural Development, Ministry of Railways and Ministry of Road Transport and Highways (MoRTH) in the manner prescribed under Section 10 (viii) of the Central Road Fund Act, 2000.

The allocation of CRF funds to each State/Union Territory (UT) by MoRTH is finalised at the beginning of the financial year. The funds earmarked for the development of State Roads (other than Rural Roads) are distributed to the States on the basis of 30 *per cent* weightage to fuel consumption and 70 *per cent* weightage to the geographical area of the States and are governed by CRF (State Roads) Rules, 2007. All the States/UTs are provided with one-third of their allocation of CRF, which is maintained as reserve by the States/UTs. This is replenished by subsequent releases based on the receipt of utilisation certificates for the amount previously released and the progress of works.

2.6.2 Organisational Setup

The Chief Engineer, National Highways, Bengaluru (CE) acts as the Nodal Officer and is responsible for the implementation of works under CRF. The works sanctioned are executed by Public Works, Ports and Inland Water Transport (PWD) and National Highways (NH) Divisions.

2.6.3 Audit objective

The Audit objective was to see whether the Planning and Execution of works under Central Road Fund were as per CRF Act and Rules.

2.6.4 Audit Criteria

Audit criteria were based on relevant parts of

- CRF (State Roads) Rules, 2007
- MoRTH specifications and relevant IRC[22] codes
- Karnataka Public Works Departmental Code and
- Guidelines and circulars issued by Government of Karnataka (GoK).

2.6.5 Scope and methodology of audit

The Audit covers execution of State Road (other than Rural Roads) works under CRF by PWD during the period 2011-16.

Scrutiny of records was carried out between October 2015 and February 2016 at the offices of Secretary, PWD, CE (NH) and all seven NH Divisions[23] which implemented CRF works. Out of 271 works sanctioned during 2011-16, 44 packages comprising 125 works were selected for detailed check. Sample selection of works was based on simple random sampling.

Audit findings

2.6.6 Planning

As per CRF rules, the State Governments should send prioritised work proposals to the Central Government for administrative approval after which the work would be executed by the State Governments and utilisation certificates sent to GoI.

[22] Indian Road Congress
[23] Bengaluru, Chitradurga, Hubballi, Karwar, Mangaluru, Tumakuru, Vijayapura

2.6.6.1 Lacunae in selection of roads

CRF (State Roads) Rules, 2007 (Rule 4) prescribe the procedure for identification and prioritisation of roads. Rule 5 (2) *ibid* specifies different type of works[24] to be considered under the scheme. As annual availability of funds towards State's share of accruals from CRF is assured and known at the beginning of the financial year, a comprehensive and strategic road plan can be drawn.

We observed that the Department had not prepared such plans and proposals received from Hon'ble Union/State Ministers, Public representatives and other officers were consolidated and proposed by the CE for consideration under CRF. CE did not maintain any data on the overall condition of roads in order to prioritise the works and GoK simply forwarded the works proposed by CE to MoRTH instead of selecting the works from a prioritised list. Thus, proposals were being sent to GoI without due assessment of needs and prioritisation by the Department. Though different types of works were prescribed under CRF, strengthening of weak pavements and sections and widening of roads only were taken up under the scheme. Other categories of works like construction of missing bridges, bye-passes and parallel service roads were not taken up, reasons for which were not on record.

2.6.6.2 Selection of roads without ensuring balanced development

Rule 5 (5) of CRF Rules, provides that the projects shall be selected with a view to have balanced development in the State. During 2011-12 to 2015-16, works were sanctioned under CRF in only two years *i.e.* 2013-14 and 2014-15. The total cost of the works sanctioned during 2013-14 and 2014-15 was ₹ 1,000 crore (256 works) and ₹ 70.50 crore (25 works), respectively. In the absence of data on road history and present condition of roads with NH Divisions as pointed out in Paragraph 2.6.6.1 and 2.6.6.3, we could not ensure that allocation of funds for works was in tune with the objective of balanced development specified in CRF Rules.

2.6.6.3 Lack of coordination between implementing agencies

Rule 7 (4) of CRF Rules 2007 stipulates that roads on which improvement work was carried out during the last three years are not eligible for new sanction under the scheme. The State Highways (SH) and Major District Roads (MDR) are within the jurisdiction of Public Works Divisions, which are responsible for their maintenance and for updating the road history. However, works on these roads under CRF were proposed and executed by NH Divisions during 2013-14 and 2014-15, respectively. There was lack of

[24] (i) Construction of missing bridges (ii) Rehabilitation of bridges (iii) Strengthening weak pavement sections (iv) widening of two lanes (v) Improvement of traffic junctions, subways and over-bridges (vi) Construction of bye-passes and parallel service roads (vii) Connecting rural roads to National Highways, *etc.*

coordination between the two authorities in selection of roads and the works were being planned by NH Divisions without consulting road history.

Instances were noticed of substitution of sanctioned work on the ground that works had already been taken up for execution by PWD. Further, EE, NH, Mangaluru Division selected roads for improvement under CRF even though they had already undergone improvement under State fund within the previous three years. The details are shown in **Table 2.1:**

Table 2.1: Selection of recently improved road works under CRF

Name of work	Remarks
Package 48 - Improvements to Konanur-Makutta road connecting Kerala Border from 1. km 21.50 to 25.00 2. km 44.25 to 46.75 3. km 78.26 to 93.50 4. km 41.032 to 45.180* taken up in November 2013	Km 0.00 to 44.25 was improved during 2011-12 and 2012-13. The expenditure had been incurred from the State Fund.
	Km 21.50 to 25 being part of the stretch previously improved (2012-13) by KRDCL was again improved in November 2013 under CRF. Hence, the expenditure incurred on this stretch (₹ two crore) was not eligible for funding from CRF.
	Km 43.810 to 43.86 was improved by PWD April 2014, hence the expenditure incurred on the stretch under CRF amounting to ₹ 1.48 crore was ineligible.
Package 47 - Improvement to road from Amrutheshwara temple in Amrutheshwara to join NH 206 at Ajjampura, *etc* taken up in November 2013	The approach road to NH 206 for a length of 1.5 km was not executed for the reason that it was covered by State Highways Development Project work and hence there was a saving of ₹ 12.81 lakh.
Package 49 - Improvements to Gonikoppa Virajpet road from km 0 to 16 administratively approved (November 2013) by GoI for ₹ 6 crore and assigned job no. CRF/KNT/ 2013-1369	The work was shelved after tender notification (November 2013) as the entire stretch had been taken up for improvement from State Funds.

(Source: Information furnished by the Department)

* This stretch was not part of sanctioned estimate and the chainages approved by GoI but executed by EE, NH Division, Mangaluru as per the instructions of local elected representative. The expenditure incurred on this extra reach without GoI approval was ₹ 1.48 crore.

2.6.6.4 Selection of roads with less than the minimum length prescribed for improvement

The CRF rules (Sub Rule-3 under Rule-5) state that the proposals shall generally be covering at least 10 km length unless the requirement for connecting two places is less than 10 km. It was however seen that out of 125 selected sample works, 49 roads works of less than 10 kms length on the existing SHs/MDRs were proposed by GoK and approved by GoI despite the fact that they did not fulfill the requisite criteria for funding from CRF. The details of projects are shown in **Appendix 2.1**.

The NH Division, Hubballi replied that the original proposals submitted by the Division was as per the CRF guidelines considering the minimum length of 10 kms and since the cost of work was restricted by the MoRTH, the lengths were restricted. The other NH divisions also gave reasons such as paucity of funds, increase in scope of work, *etc.*, for the shorter lengths considered for improvement.

The reply is not acceptable as test check of proposals sent to MoRTH revealed that the proposals *ab-initio* included projects with less than 10 km road length and cost was not restricted by MoRTH. Further, paucity of funds and increase in scope of work were due to execution of works which were not in conformity with CRF Rules, as pointed out in Paragraph 2.6.7.1.

2.6.7 Financial Management

Financial propriety requires that Government should provide adequate funds to meet the cost of committed works and fresh works proposed for the year in order to avoid cost and time over run.

2.6.7.1 Sanction in excess of admissibility of funds

As per Rule 5 (18) of CRF Rules, the total cost of works to be approved by the GoI shall be limited to the bank of sanctions which shall not normally exceed, at any point of time, two times the annual accrual for the year in which the works are sanctioned in respect of any State or Union Territory.

As per Rule 6 of CRF Rules, 2007, one-third of the accrual during the year would be placed at the disposal of State Governments as a reserve for utilisation against sanctioned works. Subsequent releases would be made by GoI on the basis of progress of works and actual expenditure subject to the condition that total releases made during the year shall not exceed the total of accruals for that year and any amount not released from accruals of previous years.

The details of proposals forwarded by GoK and sanctioned by GoI during 2011-16 are shown in **Table 2.2:**

Table 2.2: Accruals, Works sanctioned and Expenditure incurred

(₹ in crore)

Year	Amount of accruals to GoK	No. of proposals		Cost of works sanctioned for the year	Funds made available by GoK (including accruals)	Expenditure
		Sent	Approved			
2011-12	131.28	40	-	-	173.00	172.52
2012-13	138.29	17	-	-	163.05	164.05
2013-14	138.06	478	256	1,000.00	220.00	184.99
2014-15	170.51	80	15	70.50	160.14	159.78
2015-16	179.98	-	-	-	598.92	597.89
Total	**758.12**	**615**	**271**	**1,070.50**	**1,315.11**	**1,279.23**

(Source: Information furnished by the Department)

The average accrual was ₹ 121.86 crore[25] in preceding three years and accrual for 2013-14 was ₹ 138.06 crore. Thus, against admissible limit of ₹ 276.12 crore during 2013-14, GoK proposed 478 works out of which GoI sanctioned 256 works costing ₹ 1,000 crore which was far in excess of the

[25] ₹ 96.01 crore (2010-11) + ₹ 131.28 crore (2011-12) + ₹ 138.29 crore (2012-13) = ₹ 365.58 crore ÷ 3 = ₹ 121.86 crore

prescribed limit. The GoI sanctioned in excess of the prescribed limit based on the assurance by GoK that additional funds would be made available in subsequent years for completion within the prescribed period of 24 months without seeking funds from GoI and that works would not be delayed for want of funds.

GoK had to provide a budget of ₹ 1,000 crore[26] during 2013-14 and 2014-15 to meet the cost of the works. However, GoK provided only ₹ 220 crore in 2013-14 and ₹ 160.14 crore in 2014-15. This resulted in non-completion or delay in completion of works as discussed in Paragraph 2.6.8.1.

2.6.7.2 Non-reconciliation of fund balance with GoI

As per Rule 6 (1) of CRF, the total releases by GoI during the year shall not exceed the total of accruals for that year and the amount which had not been released from accruals of previous years.

GoK in their letter (April 2015) to GoI stated that for the works sanctioned during 2000-15, GoI had reimbursed ₹ 1,466.78 crore against claim of ₹ 1,808.22 crore and an amount of ₹ 341.44 crore was not yet reimbursed. However, as per Superintending Engineer (Civil), MoRTH, Regional office, Bengaluru, the amount reimbursed up to March 2015 to GoK was ₹ 1,478.74 crore against claim of ₹ 1,732.09 crore and the balance was ₹ 253.35 crore. The CE had not reconciled the differential claim of ₹ 76.13 crore with the Regional Officer, MoRTH.

The CE replied that the difference would be reconciled with MoRTH.

2.6.7.3 Cost overrun

CRF Rule 5 (5) (vi) stipulates that the estimated cost of the project should be based on actual requirement and realistic cost estimate. Further, CRF Rule 5 (9) states that excess cost beyond 10 *per cent* of the amount administratively approved for the proposal, if any, shall be arranged by the executing agency from their own resources.

Therefore, all precautions should have been taken to keep the expenditure against each proposal within the permissible limit. However, it was seen that in 22 out of 251 works, the expenditure incurred exceeded 110 *per cent* of the sanctioned cost, thereby, burdening the State Finances to an extent of ₹ 26.12 crore as shown in **Appendix 2.2.**

[26] The entire expenditure to be initially met from State funds and later to get reimbursed by GoI from accruals to CRF

2.6.8 Execution of works

Execution of works should be carried out as per the sanction accorded by MoRTH within the stipulated time. The work thus executed should be measured and paid in accordance with the prescribed procedure. We, however, noticed the following deficiencies:

2.6.8.1 Delay in completion of works

As per Rule 5 (7) and (14) of CRF Rules, the sanctioned works should be completed within 24 months from the date of administrative approval (AA) and sanctioned projects should be awarded within four months from the date of AA. Projects which did not meet this timeline were deemed to be de-sanctioned and were not eligible for reimbursement. Further, the projects which involved land acquisition shall not be considered for sanction under CRF {Rule 5(6)}. Thus, CRF guidelines sought to ensure that the projects sanctioned do not face land acquisition problems or shortage of fund. The year-wise details of works sanctioned, works not taken up for execution, number of completed works and incomplete works within the tender period are shown in **Table 2.3:**

Table 2.3: Details of works

Year	No. of proposals approved/ sanctioned	No. of works not taken up for execution/dropped	No. of works completed as per tender schedule	No. of works remained incomplete within tender schedule
2011-12	-	-	-	-
2012-13	-	-	-	-
2013-14	256	05	131	120
2014-15	15	-	0	*
2015-16	-	-	-	-
Total	**271**	**05**	**131**	**120**

(Source: Information furnished by the Department) ***-** information awaited

We test checked 256 works which revealed the following;

- The GoK had obtained sanction for projects from GoI and hence was required to make adequate budget provision during 2013-14 and onwards to ensure their completion. However, GoK failed to do so with the result that 120 works out of 256 sanctioned by GoI during 2013-14 witnessed slippages while the administrative approval taken for five works was in vain as the concerned works were not taken up.

- As of December 2015, 256 works that were administratively approved in November 2013 should have been completed as per the prescribed schedule of 24 months. We observed that only 162 out of these 256 works were completed and 89 works remained incomplete as shown in **Appendix 2.3.** The delay in completion of works of improvement of roads

costing between ₹ two crore and ₹ seven crore ranged between 2 months and 20 months as shown in **Table 2.4**.

Table 2.4: Delay in completion in test checked works

Sl No	Delay in months	Number of works
1	2 to 5	05
2	6 to 10	32
3	11 to 15	22
4	16 to 20	11
	Total	**70**

(Source: Information furnished by the Department)

- In the progress report furnished for June 2016, 220 works out of 256 were reported to have been completed. However, scrutiny of records revealed that financial progress of 65 works shown as completed were actually ranged from 0 to 25 *per cent* in five works, 25 to 50 *per cent* in six works, 50 to 75 *per cent* in 18 works and 75 to 90 *per cent* in 36 works. We could not derive assurance that all the works were actually completed.

- Above 256 works sanctioned in 2013-14 were combined into 87 packages so that contractors who owned quarry and other machineries with adequate financial/technical resources would be eligible to participate in tender procedures to facilitate early completion of the works. Despite this, the works were not completed within the prescribed timeframe which defeated the objective of entrusting the works on package basis.

- Though CRF Rules provided for de-sanction of works which did not adhere to the prescribed time-line, the details of de-sanction of works were not forthcoming as the Regional Officer, MoRTH did not reply to the audit enquiry issued (April 2016) in this regard.

2.6.8.2 Inadequate details in the sanctioned estimates

Indian Road Congress (IRC) Code 81-1997 stipulates that for improvement of existing roads, the overlay thickness (thickness of bituminous layer to be laid over the existing surface) should be computed based on traffic census and the extent of structural deficiency noticed in the reaches under improvement. The overlay suggested by the IRC 81 is bituminous macadam, the thickness of which was derivable from structural deficiency assessed by Benkelman Beam Deflection (BBD) tests. Thus, the roads with surface irregularities, pot holes, *etc*., do not require reconstruction of road from the sub-base.

In three divisions[27], in respect of 36 road improvements works not involving widening, carried out at a cost of ₹ 135.80 crore, the report accompanying the estimates did not contain details of the structural deficiency of roads and

[27] Chitradurga, Tumakuru, Vijayapura

existing crust composition and thickness. Despite the absence of these details, provisions were made in the estimates towards sub-grade, sub-base and base layers (non-bituminous and bituminous) over the existing carriageways as applicable to new constructions, in addition to bituminous surfacing. The competent authority sanctioned these estimates without assessing the actual requirements. The only justification given in these estimates was a general note mentioning damages and pot holes caused due to monsoon rains, which did not justify re-construction of the road from sub-base upwards. If the problem related only to pot holes, *etc*, it would have been enough to have surface correction with bituminous layer after filling up of pot holes. The unjustified provision towards sub-base and non-bituminous base layers worked out to ₹ 30.42 crore which constituted 23.05 *per cent* of the estimated cost of these works.

2.6.8.3 Unauthorised execution of work

Job 1411 of Package-15 executed by NH Division, Bengaluru was administratively approved (October 2013) by MoRTH and technically sanctioned by CE for improvement of 5.25 km for ₹ five crore with provision of 300 mm sub-grade, 200 mm Granular Sub Base (GSB), 200 mm Wet Mix Macadam (WMM), 50 mm Bituminous Macadam (BM) and 25 mm Semi Dense Bituminous Concrete (SDBC), *etc*. During execution, it was noticed (August 2014) that quantity was inflated in respect of sub-grade, GSB and WMM items due to arithmetical error, the correction of which resulted in a saving of ₹ 1.92 crore. The savings were utilised for additional road length of 3.9 km on the grounds that the entire stretch was severely damaged due to heavy rain fall during 2014-15.

The execution of works which were not administratively approved was in violation of the sanction accorded by MoRTH as well as provisions of Transparency Act, as it amounted to direct entrustment. Further, utilisation of savings without approval of the competent authority amounted to unauthorised diversion of CRF funds.

EE, NH Division, Bengaluru replied that the variation was effected as per the inspection note of CE. The reply is not acceptable as the work should have been taken up only after proper authorisation.

2.6.8.4 Execution of works not in accordance with IRC/MoRTH specifications

CRF Rules 10 (1) (a) specifies that the sanctioned works shall be executed following the relevant guidelines, codes and IRC specifications and as directed by GoI. However, it was observed that these specifications were not followed in the execution of the works as discussed below:

a) Providing bituminous base layer without justification

The IRC guidelines stipulate that the pavement thickness of a new road should be based on the design traffic in terms of cumulative number of standard axles to be carried by the pavements during the design life and on the California Bearing Ratio (CBR) values of the sub-grade (IRC 37-2001). The overlay thickness was to be adopted from the thickness design curve given in the IRC 81 after conducting BBD test. As per the curve, any increase in design traffic in terms of msa (million standard axles) and/or deflection values would result in increase in pavement thickness. In reaches with no structural deficiency, only a thin surfacing (wearing course) is to be provided to improve the riding quality of the road.

In six selected divisions, in respect of 20 packages, 50 mm BM layer was provided on the existing black topped roads which already contained BM layer and these estimates were prepared without conducting BBD tests. Further, estimates provided for removal of existing BM layer through scarification which was not specified in the guidelines and no justification was provided by EEs for its removal as seen from the sanctioned estimates. As per Clause 7.8 of IRC 81, before implementing the overlay, the existing surface shall be corrected and brought to proper profile by filling the cracks, potholes, ruts and undulations. Thus, it was evident that the Clause did not suggest removal of existing BM layer and improvement to riding quality could have been achieved by providing wearing course alone as recommended by IRC 81. By providing overlay with BM, the Department incurred an extra expenditure of ₹ 32.19 crore on 20 packages as shown in **Appendix 2.4.**

Three EEs[28] replied that crust thickness was computed based on CBR value of the sub-grade in accordance with IRC 37. The reply is not acceptable as IRC 37 is to be referred only when re-construction is done from sub-grade or for widening of roads which had not been objected to in Audit. The reply is silent on the observation regarding removal of BM layer and laying fresh layer on existing black topped roads and also reasons for non-conducting BBD tests to decide upon overlays on existing roads.

b) Construction of Granular Sub Base by adopting uneconomical method

MoRTH specifications (Fifth revision) (April 2013) provide for construction of Granular Sub Base (GSB) using 'Mix in plant'[29] method to ensure homogenous mix which was also economical. Scrutiny of estimates however, revealed that the 'Mix in place'[30] method was adopted for construction of GSB in 31 packages of six NH divisions and payment made accordingly resulting in extra expenditure of ₹ 4.13 crore as shown in the **Appendix 2.5.**

[28] Chitradurga, Karwar, Mangaluru
[29] Mix in plant – the aggregates are mixed in the plant
[30] Mix in place – the aggregates are mixed at the work site itself

On being pointed out, it was replied by two EEs[31] of NH divisions that estimates were prepared based on MoRTH specifications (fourth revision) which provided for 'Mix in place' method also.

The replies are not acceptable since the Mix in plant method was not only economical but also gave well mixed GSB material. Further, these estimates were sanctioned and works entrusted between March 2014 and September 2014 well after MoRTH (Fifth Revision) came into effect in April 2013.

c) Excess payment due to repetition of compaction item

As per clause 305.9.1 of MoRTH specifications, the contract rate for embankment/sub-grade should be inclusive of compacting the original ground level. Clause 401.7 of MoRTH provides that the contract unit rate for GSB shall be payment in full for carrying out the required operations for construction of GSB. Thus, the contract rate for embankment or GSB includes the cost of compaction of the original ground or the sub grade supporting them. Besides, tender conditions specify that the item was to be carried out as per MoRTH specifications. Therefore, there was no need to provide for compaction of original ground as a separate item. However, it was seen that compacting the original ground supporting the embankment or the GSB was provided for, executed and paid as a separate item in six NH Divisions in 31 packages resulting in excess payment to the contractor to an extent of ₹ 90 lakh as shown in **Appendix 2.6.**

Two of the NH divisions[32] concerned replied that compaction was inclusive in the unit rate but as per the MoRTH specifications it was exclusive where removal and replacement of suitable material or loosening and recompacting was involved. They added that since the existing bituminous surface was loosened and recompacted, the compaction could not be treated as included in the unit rate of embankment. The reply is not acceptable as the unit rate for scarifying shall also include repairing or reworking the disturbed area according to Clause 501.8.8.1 of MoRTH.

d) Avoidable expenditure due to non-utilisation of excavated soil for embankment

Clause 301.3.11 of MoRTH specification mandates that the excavated material should be used for embankment and only in case of non-suitability of the excavated earth, borrowed material should be utilised. Scrutiny of records of the seven[33] implementing NH divisions revealed that the excavated material was not used for embankment and requirement was met almost fully out of borrowed material. Non-utilisation of excavated soil for embankment resulted in avoidable extra expenditure of ₹ 2.17 crore as shown in **Appendix 2.7.**

[31] Bengaluru, Chitradurga
[32] Bengaluru, Chitradurga
[33] Bengaluru, Chitradurga, Hubballi, Karwar, Mangaluru, Tumakuru and Vijayapura

All the Divisions replied that the excavated material was not suitable for embankment. However, quality control tests' reports on the excavated material disqualifying it from use in the embankment were not provided by any of the Divisions.

e) Execution of road without sub-base

A pavement thickness comprises of sub-base, base course and wearing course. The sub-base is the bottom most layer of the crust thickness and is constructed out of well graded material consisting of natural sand, crushed gravel/stone/slag or combination thereof to serve as a drainage layer. Thus, no pavement can be constructed without a drainage layer.

As per the pavement design for Job No.1589 of Package 16 executed by the NH Division, Tumakuru, the required thickness of GSB was 230 mm in the widening portion of road but the thickness was reduced to 150 mm. However, the bill of quantities of the sanctioned estimate did not contain item for construction of even 150 mm GSB.

The IRC permits reduction of bituminous layers in stage construction but not the sub-base layer which should be constructed as per design parameter. Hence, the estimate of this work should have included provision for construction of GSB with 230mm as per the design. However, the work was completed during December 2015 without execution of GSB. Execution of the road without a sub-base layer was technically incorrect and rendered the road liable to premature failures.

EE, NH Division, Tumakuru stated that the roads improved under CRF had a far shorter designed life and the works were of improvement nature with existing configuration. The reply is not acceptable as providing GSB layer as per design curve was mandatory as per IRC norms, which was not provided.

f) Deviation in measurement of works

Pavement works

Clause 113.3 of MoRTH specifications stipulates that the finished thickness of sub-base, base and bituminous courses to be paid on volume basis shall be computed based on levels which shall be taken before and after construction at specified grids. The average thickness of the pavement course in any area shall be the arithmetic mean of the difference of levels before and after construction. The intention behind prescribing measurement by leveling is to ensure that the thickness of layers actually achieved is not less than the designed thickness as shown in the drawings and shortfall in thickness, if any, would not go undetected. The shortfall in thickness would not only result in extending unintended benefit to the contractor but would also compromise the life of the road.

Our scrutiny of Measurement Books in respect of 17 packages executed in five[34] divisions during 2013-14 to 2015-16 revealed that the prescribed method of arriving at thickness from levels was not followed and instead thickness shown in the drawings was adopted. The value of works measured and paid amounted to ₹ 144.17 crore **(Appendix 2.8).**

Two EEs[35] replied that taking measurement based on levels was tedious work and was not followed due to shortage of technical staff. The reply is not acceptable as works are required to be measured on the basis of levels. Hence, excess payment in these works cannot be ruled out.

Earth works

Clauses 301.8 and 305.8 of MoRTH stipulate that roadway excavation, embankment and sub-grade construction shall be measured separately by taking cross-sections at specified intervals before the work starts and after its completion and computing the volumes of earthwork in cubic meters by the method of average end areas.

However, it was seen that in all the Divisions no cross-sections (plotted) were maintained. Thus, the payment made towards earth works aggregating ₹ 21.03 crore was not supported by measurements based on cross-sections **(Appendix 2.8).**

The EEs of two NH divisions[36] replied that the measurement was based on length, width and depth taken at site. The reply is not acceptable as the depth and width can vary owing to undulations of surfaces, right of way restrictions at places, *etc*., and measurement of these works should be computed on the basis of cross sections. Consequently, excess payment in these works cannot be ruled out.

2.6.8.5 Non-transfer of funds meant for Quality Control

As per CRF Rules 7(3), funds to the extent of three *per cent* of the cost of the work shall be placed at the disposal of the Regional Officer, appointed by GoI or any other officer authorised for the State for incurring expenditure on manpower and for effective quality control (QC) of the works.

We observed that ₹ 34.20 crore were not transferred to the Regional Officer during 2010-11 to 2014-15 for executing QC works and for incurring expenditure on manpower. Further, scrutiny of records at NH Division, Bengaluru, revealed that out of provisions made for QC works under CRF during 2013-14 to 2015-16, an amount of ₹ 74.62 lakh was diverted for purchase of motor vehicles for PWD Minister, Secretary and others and

[34] Chitradurga, Hubballi, Karwar, Tumakuru and Vijayapura
[35] Tumakuru and Vijayapura
[36] Chitradurga and Tumakuru

₹ 13.79 lakh was diverted to meet the foreign tour expenses of Minister and other officials. In NH Division, Mangaluru, ₹ 23.93 lakh was diverted from QC fund for purchase of vehicles.

It was replied that the necessary vehicles were purchased and foreign tour expenses were incurred out of CRF as per the sanction of GoK. The diversion was irregular as CRF rules do not authorise expenditure on purchase of vehicles and foreign trips.

2.6.8.6 Absence of monitoring by Regional Officer

As per CRF rule 10 (3), GoI or any officer appointed by it as Regional Officer for the State or any other officer or agency authorised by it shall periodically inspect the works during execution. The officer so authorised shall measure the work to the extent of not less than 30 *per cent* of the total value of work to ensure execution of the work as per standards and specifications. However, it was seen that the measurements of the works executed under CRF were not check measured by the Regional Officer, MoRTH, Bengaluru, or any other authority appointed by GoI.

The Regional Officer did not offer any remarks or reply to the observation made by Audit.

2.6.9 Conclusion

Planning mechanism was not put in place for identification and prioritisation of roads under CRF. Project proposals were approved by GoI only in two out of five years. Department did not provide funds during 2013-14 and 2014-15 as committed to GoI which adversely affected the progress of works and resulted in cost overrun. IRC guidelines were not followed in preparation of projects and sanctioned estimates lacked basic inputs like existing crust thickness and past improvements undertaken. MoRTH instructions were not followed for measurement of earthwork and bituminous layers. Regional Officer did not monitor the work though stipulated in Rules. Funds earmarked for quality control were not utilised as Department did not make them available to Regional Officer.

2.6.10 Recommendations

We recommend that:

1. Strategic plan may be prepared by PWD and projects should be prioritised based on the conditions of the roads.

2. Sanctioning authority (CE) may ensure that estimates conform to prescribed IRC codes and guidelines and the estimates contain all necessary details.

3. Controlling Officers (CE/SE) may ensure that measurements are recorded as per prescribed norms and regularly monitor the progress of work and the quality parameters.

The matter was referred to Government in October 2016; their reply is awaited (December 2016).

2.7 Irregular payment

Executive Engineer failed to collect ₹ 4.12 crore towards cost of land transferred to Karnataka Housing Board and also made unnecessary payment of ₹ 12.84 crore for re-acquired land and enhanced land compensation to land owners.

Government ordered (March 2002) transfer of 179-3 *acres* of land at Kalaburagi to Karnataka Housing Board (KHB) at the rate of ₹ 2.90 lakh per *acre* for housing layout. Executive Engineer (EE), Public Works, Ports and Inland Water Transport Division, Kalaburagi (PWD) handed over (November/December 2002) 209-20 *acres* of land to KHB without collecting the cost of land. Subsequently, KHB transferred (November 2006) 59-23 *acres* of the said land back to PWD for construction of building for High Court Circuit Bench at ₹ 8.65 lakh per *acre* as sale price with a condition that any additional compensation in respect of this land should be borne by the Government. PWD paid ₹ 6.07 crore to KHB during October 2003, December 2003 and March 2008. Thus, net extent of land transferred to KHB by PWD was 142-02 *acres*[37], without recovery of cost of land.

Our scrutiny of records (September 2014) of EE revealed the following lapses;

- PWD did not pursue with KHB for recovering the cost of 209-20 *acres* of land transferred during 2002. Moreover, PWD paid ₹ 6.07 crore to KHB for re-acquisition of 59-23 *acres* of the above land from KHB, which was unnecessary as KHB had not paid PWD the original transfer cost of the said 59-23 *acres*. KHB had not yet settled (September 2016) an amount of ₹ 4.12 crore[38] towards the balance 142-02 *acres* of land.

- Honourable High Court awarded (February 2013) enhanced compensation for land (including interest) amounting to ₹ 10.78 crore in respect of 27-14 *acres* land falling under ten different survey numbers and KHB was one of the respondents. Out of the 27-14 *acres*, 17-07 *acres* belonged to KHB and 10-07 *acres* had been transferred to PWD for construction of High Court Circuit building. As per the condition imposed by KHB, the PWD was liable for enhanced compensation in respect of 10-07 *acres* of land only. However, PWD paid (October 2013) ₹ 10.78 crore towards the

[37] After deducting 7-35 *acres* utilised for outer ring road
[38] 142-02 *acres* × ₹ 2.90 lakh per *acre* = ₹ 4.12 crore

enhanced land compensation which included KHB's share of ₹ 6.77 crore towards compensation for 17-07 *acres* also. The payment of compensation in respect of 17-07 *acres* of KHB land was not justified as PWD was liable only for the re-acquired portion of 10-07 *acres*.

Thus, PWD extended undue benefit to KHB by not adjusting ₹ 4.12 crore towards cost of land transferred and unnecessarily paid ₹ 12.84 crore[39] for 59-23 *acres* re-acquired land and towards enhanced land compensation for KHB land.

The matter was referred to Government in June 2016; their reply is awaited (December 2016).

2.8 Avoidable expenditure and excess payment

Execution of extra/additional items after entrustment of work, usage of lower grade steel for structures and payment at higher rates for excavation resulted in avoidable expenditure of ₹ 10.63 crore and excess payment of ₹ 84.63 lakh.

The work of construction of Institute of Medical Science at Gadag[40] was administratively approved (October 2013) by the Government and technically sanctioned (November 2013) by the Chief Engineer, Communication and Buildings (North), Dharwad (CE) at a cost of ₹ 120 crore. The work was entrusted (April 2014) to an agency[41] at the tendered cost of ₹ 139.14 crore {(19 *per cent* above Schedule of Rates (SR) for 2013-14)} with stipulation to complete the work in 24 months. Execution of extra items/additional quantities of work was necessitated during execution of work. Accordingly, proposal for approval of additional quantities of work (work slip) for ₹ 27.92 crore and execution of extra items costing ₹ 21.59 crore was cleared (July 2015) by Technical Advisory Committee (TAC) and was pending for approval of the Government as of June 2016. The work was stated (June 2016) to have been completed and the contractor had been paid ₹ 127.40 crore which included ₹ 1.44 crore towards price adjustment. Further, Running Account Bills amounting to ₹ 39.75 crore was pending for payment (June 2016).

Scrutiny (October 2015 and May 2016) of the records of the Executive Engineer, Public Works, Ports and Inland Water Transport Division (PWD), Gadag (EE) revealed the following:

[39] Cost of land ₹ 6.07 crore + enhanced land compensation of ₹ 6.77 crore for KHB's land
[40] Comprising Main Building, Boy's Hostel, Girl's Hostel, Doctors' Quarters and residential quarters
[41] M/s BG Shirke Constructions Technology (P) Limited

(i) As per paragraph 211 of Karnataka Public Works Departmental Code, no work should commence unless proper detailed design and estimate have been sanctioned. Accordingly, the designs and drawings were required to be prepared and got approved before entrustment of work. However, PWD did not finalise the designs and drawings and the contractor was made responsible for preparation of designs of all structural members and for getting proof checked by Indian Institute of Science, Bengaluru (IISc).

During execution of work, quantity of tendered items increased as per structural designs approved by IISc and amount worked out to ₹ 27.92 crore. As per agreement, payment up to 125 *per cent* of the executed quantity of an item was to be made at quoted rate. But if the executed quantity increased beyond 125 *per cent* of the tendered quantities, that excess quantities was to be paid at SR *plus* tender premium (19 *per cent*) which was much higher than quoted rate. The rates paid for excess execution of seven items were more than the tendered rates resulting in additional cost of ₹ 3.66 crore **(Appendix 2.9)**, which was avoidable had designs and drawings been finalised at the time of sanction of estimate.

CE replied (August 2016) that due to restriction of grants, estimate was modified by substituting/deleting certain items during technical sanction. During execution, changes were made to comply with Medical Council of India (MCI) norms which had resulted in work slip/extra items.

Reply is not acceptable as the Departmental Code prescribe that structural designs should be prepared at the time of sanction of estimate and it was known fact that hospital building should conform to MCI norms.

(ii) Amongst Fe 415[42] and Fe 500 grade steel, latter grade steel has more tensile strength than Fe 415 grade steel and hence the quantity of steel required for reinforcement would be less compared to Fe 415 grade steel. The requirement of Fe 500 grade steel would be 0.83 metric tonne (MT) against use of one MT of Fe 415 grade steel and there would be consequent reduction in reinforced cement concrete cost.

We noticed that the sanctioned estimate and the structural designs provided for the use of Fe 415 grade steel for the structure. The contractor was paid ₹ 42.49 crore on utilisation of 6,063.62 MT of Fe 415 grade steel at the rate of ₹ 70,070 per MT. Failure to provide for Fe 500 grade steel resulted in excess consumption of steel by 1,030.82 MT[43] with resultant extra expenditure of ₹ 6.97 crore[44].

[42] As per IS 1786, the figures following the symbol 'Fe' indicate the specified minimum 0.2 *per cent* proof stress or yield stress

[43] (Total steel consumed × 17% savings) = (6,063.62 MT × 0.17) = 1,030.82 MT

[44] ₹ 42.49 crore – ₹ 35.52 crore *i.e.* {(6,063.62 MT - 1,030.82 MT) × (₹ 70,070 + ₹ 500)} = ₹ 6.97 crore; ₹ 500 is the difference between the cost of Fe 415 and Fe 500 grade steel

On this being pointed out, CE replied (August 2016) that Fe 500 grade steel has low ductility compared to Fe 415 grade steel. Ductility is an important factor in designing of buildings in earthquake prone areas and hence Fe 415 grade steel which has sufficient ductility was used. CE also stated that savings in steel quantity would be 0.17 *per cent* and not 17 *per cent* as claimed by audit.

The reply is not acceptable as IS 456 Code does not prohibit use of Fe 500 grade steel despite its ductility being marginally low and in earthquake prone zones. Further, as can be seen from the calculation sheets furnished by the Department, the savings in quantity would be 17 *per cent* compared to Fe 415 grade steel. CE also instructed (June 2015) that steel reinforcement of RCC members in future works should be prepared with reference to Fe 500 grade steel.

(iii) As per Schedule of Rates (SR) 2013-14, the basic rate for excavation in hard rock by manual means (chiseling/wedging) was ₹ 1,191.38 per cum[45] and by mechanical means was ₹ 548.78 per cum[46]. As hard rock was met with during excavation, the item was considered as an extra item and the rate of ₹ 1,191.38 per cum for 'excavation in hard rock by chiseling/wedging manually' was adopted.

We observed that the contractor had deviated from the specification and had excavated hard rock by mechanical means instead of manual means up to the end of June 2014. For a quantity of 13,170.86 cum of hard rock excavated up to the end of June 2014, payment was admissible as per mechanical means instead of the rate paid as per manual means. The excess payment worked out to ₹ 84.63 lakh[47]. CE replied (August 2016) that excavation by mechanical means was carried out up to July 2014 to complete the work at economical rates and control blasting was resorted to as per the request (July 2014) of hospital authorities. Reply did not offer any remarks on excess payment.

Thus, execution of extra/additional items after entrustment of work, usage of lower grade steel for structures and payment at higher rates for excavation has resulted in avoidable expenditure of ₹ 10.63 crore and excess payment of ₹ 84.63 lakh on account of incorrect regulation of rates.

The matter was referred to Government in June 2016; their reply is awaited (December 2016).

[45] ₹ 927 (SR 2013-14) + ₹ 74.16 (Area weightage 8%) + ₹ 190.22 (tender premium 19%)
[46] ₹ 427 (SR 2013-14) + ₹ 34.16 (Area weightage 8%) + ₹ 87.62 (tender premium 19%)
[47] (₹ 1,191.38 × 13,170 cum) *minus* (₹ 548.78 × 13,170 cum) = ₹ 84,63,042

2.9 Excess payment to contractors

Adoption of incorrect base percentage for calculating bitumen consumption had resulted in excess payment and short recovery aggregating ₹ 2.03 crore in three road improvement work contracts.

Table 500-10 of MoRTH[48] specifications prescribes the minimum bitumen content required for Grade I and II Dense Graded Bituminous Macadam (DBM) as 4.00 and 4.5 *per cent* respectively. Any excess or saving in consumption of bitumen during execution should be paid or recovered with reference to above percentage as applicable to specified grade in terms of Clause 507.9 *ibid*.

Our scrutiny of records relating to three[49] packages of road improvement works entrusted by Karnataka State Highways Improvement Project (KSHIP) revealed that all three contracts had specified execution of DBM Grade II as per Table 500-10. The contractors had executed DBM of Grade II with bitumen content varying between 4.5 *per cent* and 4.75 *per cent* in two packages and in one package (AEP-8)[50] both DBM Grade I & II were executed. However, the Project Director, KSHIP (PD) while allowing for variation in bitumen for DBM Grade II had adopted 4.25 *per cent* as base percentage instead of the prescribed 4.5 *per cent*. The adoption of incorrect base percentage for calculating bitumen consumption had resulted in compensating for excess quantity of bitumen and consequent excess payment to contractors. The excess payment for variation towards DBM Grade II worked out to ₹ 1.43 crore as shown in **Appendix 2.10.**

Further, in AEP-8 Package, the contract for execution of DBM Grade II was partially changed to DBM Grade I after entrustment. However, the Department paid the rate applicable to DBM Grade II, even though DBM Grade I was executed. The quantity of DBM Grade I executed was 36,845.56 *cum* with 4.2 *per cent* bitumen content as against 4.5 *per cent* quoted by the contractor for DBM Grade II. However, the PD wrongly adopted the base percentage as 4.25 instead of 4.5 resulting in short recovery of ₹ 59.33 lakh as shown in **Appendix 2.11.**

On these being pointed out (August 2015), the Government replied (June 2016) that the rates used for variation in actual percentage of bitumen were as per Clause 507.9 of MoRTH specification which is meant to regulate the rate for payment of DBM irrespective of the grading. The Government also contended our observation that the rates quoted by the contractor were for provision of bitumen at 4.5 *per cent* as the item of work was DBM Grade II was presumptive.

[48] Ministry of Road Transport and Highways
[49] WEP-1, WEP-4 and AEP-8
[50] DBM Grade I-36,845.56 cum & DBM Grade II-13,616 cum executed in AEP-8

The reply is not acceptable for the following reasons:

- The SR contains rates for DBM Grade I and II and estimate was sanctioned for DBM Grade II. In the instant case, 4.5 *per cent* was the minimum specified percentage of bitumen for DBM Grade II. Therefore, the rate quoted by the contractor for the item cannot be for 4.25 *per cent.* Hence, the Department should have calculated the excess quantity with reference to that base percentage, *i.e.* 4.5 *per cent*.

- Clause 507.9 is applicable for bituminous content only in cases when the grade of DBM is not specified in the contract documents. Where the grade of DBM is specified, Clause 507.9 and Table 500-10 existing in the same MoRTH specification should be read together.

Thus, adoption of inapplicable base percentage by incorrectly reading the relevant Clauses and Table of MoRTH specifications resulted in excess payment of ₹ 2.03 crore to the contractors.

2.10 Extra expenditure due to incorrect specifications

Incorrect application of MoRTH specifications in providing primer coat in the estimates and execution of works resulted in extra expenditure of ₹ 1.93 crore to Government.

Clause 502 of MoRTH[51] specifications stipulates application of primer coat comprising low viscosity bituminous material on porous granular surface such as wet mix macadam (WMM) and water bound macadam (WBM) before superimposition of bituminous treatment or mix. The choice of a bituminous primer depends upon the porosity[52] characteristics of the granular surface to be primed and WBM and WMM are classified as surfaces of low porosity. Hence, the schedule of rates (SR) contains different rates for primer coat with reference to type of bitumen primer and porosity.

In four road works[53] taken up under State Highways Development Project (SHDP) during 2011-13, the sanctioned estimates included (i) 'providing and applying primer coat for surfaces of low porosity with cut back Medium Cure bitumen (MC-70[54]) or any other bitumen mixed with diesel at the rate of 7.5 to 9.8 kg per 10 sqm, *etc*.**,** (item No. 21.4 of SR 2012-13 of Hassan Circle) and (ii) cleaning of WBM surface separately. The works were completed (March 2016) and the contractors were paid as per the tender rates.

[51] Ministry of Road Transport and Highways
[52] Porosity or pore space is the amount of air space or void space between soil particles. Infiltration, ground water movement and storage occur in these void spaces.
[53] Package numbers 47, 130, 135 and 136 taken up by Public Works, Ports & Inland Water Transport Division, Hassan
[54] Cut back MC-70 is a combination of medium curing asphalt and petroleum solvent

Our scrutiny (June 2016) of records at the Office of Chief Executive Officer (CEO), SHDP revealed that the primer coat provided for and executed was not only of higher specification but was also costly. As per Clause 502.2.3 of MoRTH specifications, the usage of medium curing cutback is restricted only for sites at sub-zero temperatures or for emergency applications. The recommended primer coat on the WMM/WBM surface as per MoRTH specification would be item No 21.6 of SR, *i.e.*, 'providing and applying primer coat with bituminous emulsion on prepared surface, including clearing of road surface, and spraying primer at the rate of 8 kg per 10 sqm' which also included cleaning of WBM surface. The incorrect adoption of technical specification for primer coat resulted in avoidable expenditure of ₹ 1.38 crore on primer coat (on executed quantity of 4,92,554.71 sqm at rate difference of ₹ 25.80 per sqm and ₹ 29.40 per sqm) and ₹ 55.35 lakh on cleaning (on executed quantity of 5,16,955.59 sqm at rate difference ranging from ₹ 9.66 per sqm to ₹ 14 per sqm) as shown in **Appendix 2.12.**

In reply, Government stated (November 2016) that the IRC 16-2008 does not restrict the use of cutback bitumen to sites at sub-zero temperatures or emergency applications and has distinct advantage over bitumen emulsion as more residual bitumen is left over on the roadway after curing. Government also stated that either cutback bitumen or bitumen emulsion can be used for primer coat.

The reply is not acceptable as IRC 16-2008 stipulates that correct quantity of primer should be applied for absorption by the surface so as not to cause run-off due to excessive primer and low porosity of the base course is the governing factor for choice of bitumen. In other road projects including World Bank aided projects in the same locality, bitumen emulsion was used as primer coat on WMM surface.

Thus, non-compliance to MoRTH specifications in respect of providing primer coat in the estimates and execution of works accordingly resulted in extra expenditure of ₹ 1.93 crore.

2.11 Inadmissible payment towards price adjustment

Executive Engineer in one road work contract paid ₹ 97 lakh towards price adjustment for ineligible components in violation of Government order.

In order to compensate contractors for the rapid fluctuation in the rates of construction materials, Government of Karnataka introduced[55] (2008) star rates for specified materials in works costing more than ₹ 50 lakh and where period of execution was more than six months or equal to 12 months. Star

[55] Government Order No. FD 03 PCL 2008 dated 21 November 2008

rates for specified materials *i.e.,* cement, steel and bitumen shall be payable based on the All India Average Wholesale Price Index. The star rates shall be as per the increase/decrease in the index as applied to the said materials between the last date for receiving the bids and the date of execution as per the programme of works submitted by the contractor and approved by the Department. In addition, if the contract period is extended due to no fault of the contractor, the modified programme shall be approved by the competent authority and shall become a part of the agreement for which star rates will be applicable.

The work of providing cement concrete pavement to Shankarmutt road in Shivamogga city (Ch 0.00 to 1.020 km) was administratively approved (January 2011) by Government at a cost of ₹ nine crore. The work was awarded (June 2011) to an agency[56] at a cost of ₹ 8.85 crore for completion within the stipulated period of nine months. The agreement provided for payment of star rates only in respect of cement and steel as the period of completion was less than 12 months. The scope of work was subsequently increased and time extension granted up to March 2013. A revised estimate for ₹ 15.99 crore was submitted (January 2013) to Government by the Chief Engineer, Communications and Buildings (South). Government gave (March 2013) revised administrative approval subject to clearance by State Level Technical Advisory Committee (SLTAC). The SLTAC instructed (January 2014) that the contract[57] be closed and directed the Department to prepare a detailed estimate for the additional works. Accordingly, order for stoppage of work on *'as is where is basis'* was issued (January 2014) and final bill of ₹ 11.38 crore was paid, which included price adjustment of ₹ 1.14 crore. The balance work costing ₹ 1.63 crore was not taken up (September 2016).

Scrutiny of records revealed that the original contract period of nine months was extended by another twelve months due to reasons attributable to the Department. In view of this, the contractor was eligible for payment of star rates for cement and steel[58] consumed on works executed during the extended period of contract also *i.e.,* up to March 2013. The Executive Engineer, Public Works, Ports and Inland Water Transport Special Division, Shivamogga (EE), however, adopted price adjustment for cement, steel, labour, fuel, plant and machineries and all commodities and paid ₹ 1.14 crore to the agency as against ₹ 17.15 lakh which was payable as per star rates **(Appendix 2.13).**

Thus, adoption of price adjustment for ineligible components by EE in violation of Government Order resulted in inadmissible payment of ₹ 97.36 lakh[59] to the agency.

[56] M/s Rao Constructions, Bengaluru
[57] Since widening of road in certain reaches within the city limits could not be taken up due to litigation
[58] This work was 'laying of concrete road' and hence usage of bitumen was not involved
[59] ₹ 1.14 crore - ₹ 17.15 lakh

In reply, CE accepted (July 2016) that the contractor was eligible for star rates only during the extended period of the contract, but Divisional Office has paid additional amount of ₹ 97.36 lakh towards price adjustment, which was incorrect. Government intimated (November 2016) that recovery of excess payment could not be done as Hon'ble High Court of Karnataka had issued interim orders against recovery from bills in view of bank guarantees furnished by the contractor.

2.12 Unwarranted expenditure and loss of functional area

Failure to exercise controls led to sub-standard construction of multi-storied building resulting in loss of functional area due to cancellation of construction of two floors. Besides, unwarranted expenditure of ₹ 64.78 lakh was incurred towards consultancy and strengthening works.

The City Civil Court, Bengaluru approved (2003) construction of a multi-level parking facility and Court building at Bengaluru. The Chief Architect had furnished architectural drawings for the Court complex comprising of sub-basement, basement, ground floor plus eight floors and terrace on a total plinth area of 3,210 sqm. The construction of the court complex was taken up in phases and details of completion are as shown in **Table 2.5** below:

Table 2.5: Construction of court complex in phases and details of completion

(₹ in crore)

Phase	Name of the contractor	Date of work order	Date of completion	Tender cost
First Phase (Half portion of sub-basement)	Swathi Constructions	22.12.2004	21.03.2005	2.71
Second Phase (Remaining portion of sub-basement, basement & ground floor	P. Vijaykumar	30.09.2005	29.12.2006	5.78
Third Phase (1st to 4th floor)	P. Vijaykumar	21.02.2007	20.05.2008	10.62
Fourth Phase (5th & 6th floors)	S. Shivaraj	05.04.2014	04.04.2015[60]	12.64

The construction was taken up for housing nine Court Halls on the fifth floor and four Court Halls and auditorium on the sixth floor (Fourth phase). Subsequently, construction of auditorium was dropped to accommodate more Court Halls as per the requirement (October 2013) of the Law Department. While breaking (May 2014) the dummy columns of fourth floor for lapping of steel requirement for the next floor, it was found by the Assistant Executive Engineer that the quantity of steel reinforcement provided was less than that

[60] Stipulated date of completion

required as per the approved design[61]. Therefore, the Chief Engineer, Communication and Buildings (South), Bengaluru (CE) decided (August 2014) to get expert advice on the stability of the structure to withstand the load of additional floors.

The consultancy firm engaged (August 2014) at a fee of ₹ 20.55 lakh reported (December 2014) that the size and area of steel in nine columns from the basement to the third floor along Grid-13 did not conform to structural drawings and were inadequate to withstand the load of two additional floors. The consultant suggested strengthening measures estimated to cost ₹ 44.23 lakh[62]. This report was reviewed in the meeting held on 3 February 2015 headed by CE and decision was taken to restrict the building to six floors against planned eight floors and to undertake strengthening measures as recommended by the Consultant.

The financial progress given by the contractor was ₹ 2.46 crore as of August 2015 and the work was still under progress (September 2016).

Scrutiny of records showed lapses in execution, supervision and false recording in measurement of works as given below:

- As per Clause 13.6 of IS 456:2000, before concreting, it was imperative on the part of the engineer in-charge of the work to check that steel reinforcements were provided as per drawings issued. This was not done. Hence, the deficiency in use of steel did not come to light on time.

- The contract for construction for the third phase provided for reinforcement of 5,247 quintals of steel while consumption was 5,715.06 quintals as per the final bill. Though the contractor had actually used less quantity of steel as revealed in the Consultant's report, the engineer-in-charge of the work had recorded measurements to match execution to the approved designs and even more in the Measurement Book (MB). Thus, the measurements recorded in the MB were fictitious.

- The CE had sought expert opinion on the stability and feasibility of constructing additional two floors to make it a six storied building even though the building was originally planned to have eight floors.

- As per the report of the consultant, the size of the columns along Grid-13 from the basement level was not as per approved drawings apart from less use of steel.

[61] The discrepancy was found in 75 columns in that floor (out of 131 columns) and quantity of steel actually provided was found to be less up to 45.35 *per cent*.

[62] This work was also given to the same contractor who was entrusted with the construction of the fifth and sixth floors.

The lapses resulted in unwarranted expenditure of ₹ 64.78 lakh[63], besides loss of functional area of two floors meant for court halls (6,240 sqft).

The Government while accepting the lapses stated (August 2016) that the Department has initiated disciplinary action against the officers concerned. Also, action is being taken to recover the differential amount from the contractor.

WATER RESOURCES DEPARTMENT (MINOR IRRIGATION)

2.13 Providing Solar Pumps for irrigation under Special Component Plan/Tribal Sub Plan

Highlights

1. **No guidelines were prepared for implementation of schemes and selection of beneficiaries lacked transparency.**
2. **Selection of pumps was not based on proper assessment of technical requirement. Higher capacity and costlier type of systems were procured resulting in unwarranted expenditure of ₹ 8.22 crore.**
3. **Rate contract in North and South Zones were not compared and difference in rate in respect of 1,218 installations worked out to ₹ 26.74 crore and payments to suppliers were made without obtaining commissioning reports and test certificates.**
4. **There were delays in installation of systems and attending to complaints, however, penalty as per the agreement was not levied.**
5. **Central subsidy of ₹ 33.22 crore was not availed.**

2.13.1 Introduction

To provide assured irrigation benefit to farmers belonging to Scheduled Castes and Scheduled Tribes, the Minor Irrigation Department (Department) of Government of Karnataka (GoK) undertook (2008-09) drilling of borewells in the beneficiaries' land under Ganga Kalyana Scheme. However, a large number of borewells remained non-functional as they could not be energised due to the power deficit in the State. Hence, the Department decided (January 2014) to install Solar Water Pump Systems (SWPS) for 2,500 new borewells which were drilled during 2013-14 in 19 districts under Special Component Plan (SCP)/Tribal Sub Plan (TSP) grants. The Ministry of New and Renewal Energy (MNRE), Government of India (GoI) extends subsidy to projects that harness solar energy. Karnataka Renewable Energy Development Limited (KREDL) was designated as the nodal agency by MNRE for obtaining central financial assistance.

[63] ₹ 44.23 lakh for strengthening measure + ₹ 20.55 lakh towards consultation fees

Executive Engineers of Vijayapura and Mysuru Divisions were made Nodal Officers in respect of North and South Zone of the Department respectively for empanelment of agencies for SWPS through *e*-procurement. The programme of providing SWPS was carried out during 2014-16.

2.13.2 Organisational setup

The Secretary is the administrative Head of the Department and is assisted by two Chief Engineers (North and South Zone), four Superintending Engineers and 17 Executive Engineers (Divisions) (North Zone – eight Divisions and South Zone – nine Divisions). The programme was implemented in 10 Divisions[64] (North Zone – seven Divisions and South Zone – three Divisions).

2.13.3 Audit Objectives

The objectives of Audit were to assess whether prescribed rules and guidelines were followed in:

- Selection of beneficiaries,
- Conducting feasibility studies,
- Drawing-up of specifications, and
- Selection of vendors.

Adherence to contractual provisions and monitoring in order to realise the objectives of the scheme and claiming of subsidy were also assessed.

2.13.4 Audit Criteria

The sources of Audit criteria adopted for assessing the achievement of the audit objectives were:

- Karnataka Transparency in Public Procurement (KTPP) Act and Rules,
- Karnataka Public Works Departmental Code and relevant rules,
- MNRE guidelines for availing Central Financial Assistance,
- The Karnataka Scheduled Castes Sub-Plan and Tribal Sub-Plan (Planning, Allocation and Utilisation of Financial Resources) Act, 2013 and
- Guidelines issued by Social Welfare Department in 2012.

2.13.5 Audit Methodology

Five Divisions (North Zone – three[65] Divisions and South Zone – two[66] Divisions) were selected for audit based on random sampling. Besides

[64] South Zone: Chitradurga, Hassan and Mysuru
North Zone: Ballari, Belagavi, Bidar, Dharwad, Kalaburagi, Kushtagi and Vijayapura
[65] Dharwad, Kalaburagi and Vijayapura

scrutiny of records at Government level and two Zonal Offices, field visits were undertaken during July-August 2016 and responses obtained through issue of Audit Notes.

2.13.6 Financial and physical progress

The SWPS works were taken up during 2013-14 by utilising the budgetary allocation under SCP/TSP grants. In North Zone, SWPS of 5 Horse Power (HP) capacity with fixed sun-tracking system were installed while in South Zone, SWPS of both 3 HP and 5 HP capacities with fully automatic sun-tracking system were installed during 2014-15 and 2015-16. The details of installations in the two Zones as on March 2016 are shown in **Table 2.6:**

Table 2.6: Installation of SWPS

Zone	5 HP		3 HP		Total (No.s)	Total cost (₹ in crore)
	No.s	Rate (₹ in lakh)	No.s	Rate (₹ in lakh)		
CE, MI (North)	1,218	6.81	0	0	1,218	82.95
CE, MI (South)	799	5.60	56	4.14	855	47.06
Total	**2,017**		**56**		**2,073**	**130.01**

(Source: Information furnished by the Department)

Audit findings

Our scrutiny revealed that the programme was ill-conceived since guidelines had not been put in place, beneficiary selection suffered from lack of transparency, there were lapses in invitation and evaluation of tenders and extra burden was caused to exchequer due to improper selection of solar systems, *etc*., as brought out in the succeeding paragraphs.

2.13.7 Selection of beneficiaries

Effective implementation of any beneficiary oriented programme requires that guidelines indicating the criteria and method for selection of beneficiaries be put in place before implementation so that the intended objectives of the scheme are achieved and benefits are availed by the deserving beneficiaries. Various deficiencies were noticed in the selection of the beneficiaries, which are discussed below:

2.13.7.1 Absence of guidelines

Social Welfare Department (SWD) is the Nodal Department for implementation of scheme/programme under SCP/TSP grants as per Karnataka SCP/TSP Act, 2013. SWD had issued (April 2012) detailed guidelines covering various aspects including selection of beneficiaries and

[66] Hassan and Mysuru

sharing of cost by the beneficiary for implementation of a similar programme[67] through two Corporations[68] under it.

Providing irrigation facility to individual beneficiaries' land by harnessing solar energy was a new programme conceived by the Department. Hence, detailed guidelines covering eligibility criteria, method of selection of beneficiaries, terms and conditions for availment of benefits, sharing of cost, *etc*., were required to be framed for ensuring transparency and for proper implementation of the programme. The Department could have adopted the norms followed by the Nodal Department as the objective was similar *i.e.*, to improve the economic condition of the beneficiaries through assured irrigation.

Our scrutiny showed that the Department had not issued comprehensive guidelines before implementation of the programme. The instructions issued by SWD for selection of beneficiaries were also not followed. The administrative approval accorded by Government during May 2014 merely stated that the expenditure on SWPS should be charged to the respective estimates *i.e.*, each SWPS was treated as a separate work. The list of works containing the names of the beneficiaries and estimated cost was however approved by GoK in March 2014 *i.e.*, before administrative approval. Specific guidelines like size of the land holding, nature of land, depth of borewell, *etc.*, were also not prescribed by the Department. In the absence of guidelines, the selection of beneficiaries was left to the discretion of field level offices.

2.13.7.2 Lack of transparency in selection of beneficiaries

We observed that the procedure adopted for finalisation of beneficiaries was not on record. Scrutiny of the list of beneficiaries showed instances of multiple allotments to the same beneficiary, multiple installations treating members of a family as community beneficiaries, allotments to persons who had availed benefits from other departments under different schemes and installation on land which was proposed for acquisition by Government agencies, as shown in **Appendix 2.14**. Further, land holdings of more than six *acres* were also included while SWPS with a maximum capacity of 5 HP could cater to the needs of six *acres* only as per design parameters.

2.13.7.3 Sharing of cost

The programme implemented by SWD stipulates sharing of cost by the beneficiary *i.e.*, 25 *per cent* cost was to be borne by the beneficiary. However, the programme undertaken by the Department did not contemplate sharing of cost by the beneficiary. As a result, the entire cost under the programme was borne by GoK. The additional cost borne by the Department worked out to ₹ 32.50 crore.

[67] Ganga Kalyana Scheme

[68] Dr BR Ambedkar Development Corporation and Karnataka Maharshi Valmiki Scheduled Tribes Development Corporation Limited

The Chief Minister of Karnataka while reviewing (August 2015) the programme observed that the Department had violated the provisions of Karnataka SCP/TSP Act, 2013 in the selection of beneficiaries and providing SWPS entirely at Government cost was discriminatory *vis-a-vis* similar schemes undertaken by other departments. The Chief Minister directed that the programme should be stopped and hence the Department did not take up the programme during the subsequent years.

2.13.8 Feasibility study

As providing irrigation facility by harnessing solar energy was a new programme, the feasibility of the sites/borewells for installation of the SWPS was required to have been ascertained by the Department before taking up implementation across the State. Instead, the Department entrusted conducting of feasibility study to the agencies which were to supply and install the SWPS. However, the Department did not ensure the completeness of the feasibility studies before issue of letter of intent which resulted in violation of technical norms as discussed below:

2.13.8.1 Deficiency in feasibility report

As per tender conditions (Section V of the agreement), the agencies were required to conduct technical feasibility of the sites for ensuring their suitability and the Division would accordingly place indent for installation of SWPS. The feasibility report was to contain details of head[69], water output and water table for each borewell. Further, as per tender specification, borewells with a depth of 200 ft were to be fitted with 3 HP pumps and those between 200 ft to 300 ft were to be fitted with 5 HP pumps. The minimum yield prescribed for 3 HP and 5HP pumps was 57,000 LPD (Litres per Day) and 91,000 LPD, respectively.

Test check of records in five Divisions showed that the feasibility reports furnished by the agencies did not contain the requisite technical details, despite this, indents were placed by EEs. Out of 1,170 installations reviewed by us, feasibility reports were available in respect of 636 (54 *per cent*) installations, out of which, only four cases were found technically feasible for installation. The remaining 632 installations were not feasible as per the norms specified in the tender. Thus, 1,166 SWPS were installed at a cost of ₹ 71.62 crore disregarding the technical norms. The details are shown in **Appendix 2.15.**

2.13.9 Technical specifications

The technical parameters designed for the programme indicated that borewells up to 200 ft depth were to be fitted with 3 HP pumps and those between 200 ft

[69] Difference in height between borewell bottom level and the water level

to 300 ft with 5 HP pumps. However, the type of solar tracking system for the panel had not been indicated. This resulted in installation of different systems in both the zones without assessment of technical benefits, as discussed below:

2.13.9.1 Selection of expensive SWPS without justification

Rate contracts for three types of SWPS of 3 HP and 5 HP (fixed type Solar panel/manually operated sun tracking system and automatic sun tracking) were accepted in both the Zones. In North Zone, while SWPS with fixed type solar panels were installed, in South Zone, relatively expensive SWPS with automatic sun tracking systems were installed based on instructions of CE (South). However, it was seen that no technical justification was on record for opting for automatic sun tracking SWPS, nor were its benefits assessed at any stage.

As per the tender conditions, the SWPS should withstand high wind velocity up to 150 km per hour and be tested for dry operation of pump sets, lightning, *etc*. Verification of the test certificates (issued by MNRE authorised test centres) in respect of 558 SWPS installed in the South Zone revealed that the certificates were for manual tracking system though the SWPS installed in South Zone were fully automatic type. Further, mandatory tests against wind speed, lightening and hailstones were not conducted. The test certificates in respect of SWPS installed in the North Zone were not furnished.

Joint inspection (June-July 2016) of several installations was conducted by us with the officers of the Department. During field visits to 45 installations under South Zone, automatic tracking system in respect of 15 SWPS were found to be defunct or defective. Three of the 15 SWPS were damaged due to strong winds. The fixed type SWPS were sturdier and could withstand the wind velocity. Thus, unjustified decision in selection of automatic SWPS resulted in additional expenditure of ₹ 8.22 crore, as indicated in **Table 2.7:**

Table 2.7: Additional expenditure

(Amount in ₹)

<table>
<tr><th rowspan="2">Particulars</th><th colspan="2">Capacity of pump</th></tr>
<tr><th>5 HP</th><th>3 HP</th></tr>
<tr><td>Rate for Automatic type</td><td>5,60,000</td><td>4,13,594</td></tr>
<tr><td>Rate for Fixed type</td><td>4,61,563</td><td>3,49,732</td></tr>
<tr><td>Difference in rates</td><td>98,437</td><td>63,862</td></tr>
<tr><td>No. of Pumps Installed (Automatic type)
<table>
<tr><th>Division</th><th>5HP</th><th>3 HP</th></tr>
<tr><td>Mysuru</td><td>289</td><td>41</td></tr>
<tr><td>Hassan</td><td>213</td><td>15</td></tr>
<tr><td>Chitradurga</td><td>297</td><td>0</td></tr>
<tr><td>Total</td><td>799</td><td>56</td></tr>
</table></td><td>799</td><td>56</td></tr>
<tr><td>Extra Cost</td><td>7,86,51,163</td><td>35,76,272</td></tr>
<tr><td>Total Extra cost</td><td colspan="2">8,22,27,435</td></tr>
</table>

(Source: Information furnished by the Department)

EE, Minor Irrigation Division, Mysuru stated (September 2016) that selection was done by higher authorities and agency had been informed to repair the SWPS. Thus, we could not obtain assurance that selection was based on sound technical justification.

2.13.9.2 Unwarranted expenditure on installation of higher capacity SWPS

In MI Division, Mysuru, we observed that 12 borewells with water level less than 200 feet were fitted with higher capacity SWPS (5 HP) instead of 3 HP capacity SWPS required as per technical norms. In Kalaburagi division, SWPS for eight open wells with water level less than 200 feet were fitted with 5 HP pump sets instead of 3HP pump sets. The unwarranted installation of higher capacity pump sets resulted in avoidable expenditure of ₹ 35.09 lakh[70] in these 20 cases.

2.13.9.3 Unproductive expenditure due to installation of SWPS in water table depleted areas

With a view to regulate the usage of ground water, District Ground Water Authority (Authority) notified (2012) Badami and Bagalkot taluks in Bagalkot district as over-exploited taluks and prohibited drilling new borewells in these taluks except with the prior permission of the Authority. We observed that MI Division, Vijayapura had taken up drilling of 35 borewells in these taluks (May 2015), for which SWPS were also installed.

However, the permission obtained was only for drilling borewells for drinking water purpose and not for irrigation. Thus, installation of 35 SWPS by incurring an expenditure of ₹ 2.38 crore was unauthorised.

2.13.10 Selection of vendors

Government of Karnataka, in order to ensure transparency in public procurement of goods and services and to streamline the procedure of inviting, processing and acceptance of tenders by procurement entities, enacted the KTPP Act, 1999. The KTPP Act *inter alia* prescribes the procedure for evaluation of tenders to ensure proper selection of vendors. Our scrutiny revealed violation of the provisions of KTPP Act as described below:

[70] Mysore: ₹ 5,60,000 (5 HP) - ₹ 4,13,594 (3 HP) = ₹ 1,46,406 × 12 cases = ₹ 17,56,872
Kalaburagi: ₹ 6,81,100 (5HP) - ₹ 4,62,100 (3 HP) = ₹ 2,19,000 × 8 cases = ₹ 17,52,000
i.e. ₹ 17,56,872 + ₹ 17,52,000 = ₹ 35,08,872

2.13.10.1 Insufficient bidding time

As per the KTPP Act, for works costing more than ₹ two crore, a minimum bidding time of 60 days has to be allowed. However, both North and South Zones resorted to short term tenders, which allowed bidding time of nine days and 34 days for North Zone and South Zone respectively while inviting rate contract tender[71]. There were no recorded reasons for resorting to short term tenders. The lowest rates obtained through tender were approved and work orders for supply and installation of SWPS were issued to one agency for the North Zone and six agencies for the South Zone. The details of invitation of short term tenders, responses received and dates of opening and acceptance of bids, as well as our comments thereon, are shown in **Table 2.8:**

Table 2.8: Details of bidding time allowed

Details	CE (North) Zone	CE (South) Zone	Audit remarks
Nodal Division	Vijayapura	Mysuru	As against the stipulated bidding time of 60 days, actual bidding time was 34 days for South Zone and nine days for North Zone. Not allowing adequate bidding time created a risk that sufficient number of competitive bids would not be received.
Notification date	7.5.2014	30.4.2014	
Last date for submission of bids	16.5.2014	3.6.2014	
No. of bids received	4	15	
No. of bids technically qualified	2	8	Allowing more bidding time in South Zone created more competition compared to that in North Zone.

(Sources: Information furnished by the Department)

2.13.10.2 Acceptance of non-responsive tenders

As per Rule 21 of KTPP Rules, 2000, the Tender Accepting Authority shall evaluate the tender strictly in accordance with the evaluation criteria indicated in the tender documents. Further, as per tender conditions, a substantially responsive bid was defined as one which conforms to all the terms and conditions of the bid document without material deviations. Non-responsiveness cannot be made responsive by the bidder by correcting the non-conformity at a later stage. Following deficiencies were observed while accepting tenders:

[71] It was proposed to install 40-50 SWPS units (estimated cost of 3 HP unit: ₹ 4.20 lakh) in each district. Hence, the total cost of the tender was more than ₹ two crore.

Table 2.9: Deficiencies in acceptance of tenders

Zone	Observation
South Zone	As per the conditions of tender, the bidder should be an MNRE- approved[72] channel partner till the commissioning of the project. However, it was observed that one agency, *viz*. M/s Enzen Global Solutions, which was entrusted with 312 installations did not have the accreditation of MNRE.
North Zone	As per tender conditions, the bidder should have successfully installed, commissioned and maintained in Government/Private Sector at least 10 AC[73] SWPS in the last three financial years preceding the year of submission of bids. M/s Jain Irrigation Systems did not satisfy this criteria as no documents were uploaded in this regard. Though the Divisional Officer, MI Division, Vijayapura pointed out the non-conformity, this was overlooked by the higher authorities and tenders were accepted from this bidder. Acceptance of ineligible tender had an impact on the timely execution of the scheme, since the agency failed to complete the work on time citing non-availability of AC pumps as one of the reasons, besides submitting that it was prepared to supply DC[74] pumps only.

2.13.10.3 Rate variation across zones

Since SWPS were being procured for the first time by the Department, their rates were not available in the Schedule of Rates of the Department. Though the process of invitation and acceptance of tenders was being done separately by North and South Zone, the tenders were approved at the Government level. Despite this, the accepted rate of 5 HP SWPS in North Zone was 48 *per cent* more than the accepted rate for the same item in South Zone, as shown in **Table 2.10**. Financial prudence required that the difference in the rates between the two zones be analysed before committing to excess expenditure of ₹ 26.74 crore. This was not done.

Table 2.10: Details of tender process and extra cost due to failure to finalise rate contract

Details	North Zone	South Zone
Date of opening financial bids	10.06.2014	26.06.2014
Date of acceptance of financial bids	23.06.2014	28.08.2014
Rate accepted for fixed type of SWPS (per unit)	₹ 6,81,100	₹ 4,61,563
Difference per unit	₹ 2,19,537	
No. of installations at higher rate	1,218	
Total extra cost	**₹ 26,73,96,066**	

(Source: Information furnished by the Department)

KREDL was designated as the nodal agency by MNRE for implementation of SWPS in Karnataka. All procurements of SWPS by Government departments were to be carried out through KREDL for ensuring correct specifications and for obtaining central financial assistance.

[72] Central Financial Assistance would be available only for those SWPS installed through MNRE approved channel partners.
[73] Alternate Current
[74] Direct Current

It was observed that the Department did not procure the SWPS through KREDL but instead procured them on its own at different rates for North and South Zones, which resulted in procurement at higher costs. In reply it was stated that due to urgency in utilising the grants, procurement through KREDL was not considered.

2.13.11 Adherence to contractual provisions

We observed that the conditions specified in the agreement relating to completion of works in time, comprehensive maintenance and warranty were not enforced by the Department while executing the works as brought out below:

2.13.11.1 Delay in completion of works

As per clause 2 of the General Conditions of Contract (GCC), the bidder was to complete the supply, installation, testing and commissioning of SWPS within 60 days from the date of placing the indent. Further, clause 16 of GCC stipulated that if the agency failed to implement the project as per the implementation schedule, Earnest Money Deposit along with Performance Security Deposit would be encashed in addition to two *per cent* of the value of work without further notice.

It was observed that the agencies failed to adhere to the time schedule and 767 installations out of 1,170 installations were completed with delay ranging up to 15 months. In North Zone, though the CE had granted extension of time, no liquidated damages (LD) were recovered except in Kalaburagi Division, where a nominal amount of ₹ 8.38 lakh was recovered as penalty.

In South Zone, though there was delay in completion of the project, no extension of time was sought or granted. The division-wise details of delay, LD recoverable and recoveries effected were as given in **Table 2.11:**

Table 2.11: Details of delay, LD recoverable and recoveries effected

(Amount ₹ in lakh)

Divisions	Number of installations delayed	Maximum delay	Penalty recoverable[75]	Penalty recovered
Vijayapura	111	13 months	42.80	Nil
Kalaburagi	241	15 months	82.07	8.38
Dharwad	252	6 months	85.81	Nil
Mysuru	49	11months	42.84	Nil
Hassan	114	14 months	31.63	Nil
Total	**767**		**285.15**	**8.38**

(Source: Information furnished by the Department)

Failure to levy prescribed penalty resulted in undue financial benefit to the agencies.

[75] Penalty recoverable was worked out based on 5% performance security and 2% of the value quoted for the item.

2.13.11.2 Irregular release of Earnest Money Deposit

As per the terms of the contract, the Earnest Money Deposit (EMD) along with Performance Security Deposit was required to be retained till the successful commissioning of the project. In case of delay by the agency in commissioning the project, the deposit would be forfeited.

However, it was noticed that the EMD of ₹ 30 lakh collected from six agencies was released (December 2015) by Mysuru Division, though the commissioning reports were not furnished in any of the cases by the agencies.

2.13.11.3 Release of payments without obtaining commissioning and test certificates

As per the conditions of the contract, 90 *per cent* of the bill amount was to be released after satisfactory supply, installation, testing and commissioning of the project. Commissioning Report duly signed by the authorised representative of the Division had to be enclosed with the bill for claiming payment. Balance 10 *per cent* of the bill amount was to be released in five equal instalments during the five years of satisfactory maintenance of the SWPS. Further, as per Clause X under Section VII of GCC, the entire system should be appropriately tested and certified by the authorised test centres of MNRE after commissioning to meet the performance and water discharge norms specified in Section II. Also, the system has to be handed over to the beneficiaries only after seven days of continuous successful operation.

In five test checked Divisions, we observed that 90 *per cent* of bill amounts were released without obtaining test certificates after commissioning. Also, the tender condition of mandatory seven days' trial run was not followed. Release of payments aggregating ₹ 71.83 crore without adequate testing was injudicious as untested SWPS are likely to have a higher failure rate and required performance and water discharge norms may not be met.

2.13.11.4 Payment without check measurements

As per Codal provisions, measurements for first and final bills shall be check measured by the Divisional Officer (EE) before making payment. Our scrutiny revealed that in 38 cases payments aggregating ₹ 2.12 crore were released without check measurements by the Divisional officer. Thus, EE did not ensure that SWPS were actually installed and conformed to specifications before releasing the payment.

2.13.11.5 Maintenance of SWPS after commissioning

The agreement provides for five years' comprehensive maintenance of the SWPS which shall include corrective maintenance and routine service visits. However, shortfalls in compliance to these conditions were noticed by us as narrated below:

Routine maintenance visits were not done in any of the cases and the prescribed Maintenance Register was not maintained. The number of service personnel deployed *i.e.* 12 persons (one for each district) for 1,218 installations in North Zone and seven persons for 855 installations in South Zone were inadequate to provide prompt service to the installations considering the vast and remote area of the installation sites. Some non-functional installations that had been lying unattended since several months were noticed during joint inspection. Out of 98 SWPS jointly inspected by us with departmental personnel, 28 were found to be non-functional since one year**.** Details are shown in **Table 2.12:**

Table 2.12: Non-functional installations

Division	No. of installation inspected	No. of SWPS functional	Problems in Tracker/ panel	Problems in Pump/ Motor, *etc*	Insufficient yield reported by beneficiary	Panel broken/ dismantled, *etc*
Vijayapura	06	04	0	1	0	0
Kalaburagi	14	12	0	1	1	0
Dharwad	33	30	0	0	3	0
Mysuru	23	6	9	3	3	3
Hassan	22	18	2	1	0	1
Total	**98**	**70**	**11**	**6**	**7**	**4**

(Source: Information obtained through joint field inspections)

Though tenders conditions specify that the complaints received must be attended to within two days, the above illustration shows that there was much delay in attending to the fault. Further, no action was taken against the agencies for the lapse.

2.13.11.6 Failure to provide warranty

As per the conditions of agreement, the Photo Voltaic Modules must provide warranty for output wattage, which should not be less than 90 *per cent* at the end of 10 years and 80 *per cent* at the end of 25 years. Also, the whole system, including pumps, should have warranty for *five* years. Required spares for trouble-free operation during the warranty period should be provided along with the system. A warranty card for the modules and the motor pump set should also be provided to the beneficiary.

Joint verification of installations by us and departmental personnel revealed that the agency had not handed over the warranty cards in respect of the installed SWPS to the beneficiaries and the beneficiaries were not aware of such warranty. In one Division (Hassan), it was noticed that warranty cards were enclosed with the paid vouchers and kept in the Division instead of being handed over to the beneficiaries. This was not only in violation of tender conditions, but also defeated the very purpose of providing the warranty.

2.13.12 Failure to appoint third party for inspection

To ensure adherence to quality standards, check corrupt practices and instil public confidence in the system, GoK issued (17 February 2005) instructions stipulating mandatory third party inspection in respect of all works contracts of estimated value more than ₹ two crore and all goods and equipment contracts estimated to cost more than ₹ 25 lakh. Further, third party inspection is mandatory for claiming Central Financial Assistance (CFA) in the form of MNRE subsidy. The conditions of agreement with the agencies also provide that the Chief Engineers appoint third party for inspection of commissioned projects.

However, third party inspection had not been carried out in any of the cases violating the tender condition as well as the Government order.

2.13.13 Claiming of subsidy

As per the MNRE guidelines, the SWPS installed were eligible for CFA at the rate notified by MNRE from time to time. To claim CFA, the project was required to be approved by the committee constituted by the MNRE. The Department, being the Project Administrator should have got the project sanctioned by MNRE beforehand or alternatively involved KREDL (designated nodal agency) in procurement process for availing the CFA but these were not done. Though tender conditions stipulated that the bidder should be a MNRE channel partner, the *modus operandi* for availing the CFA was not incorporated in the agreement. Hence, the Department lost the opportunity of obtaining CFA through the channel partner also.

The Department, after completion (March 2015) of the project, approached (January 2016) KREDL, which was the State Nodal Agency and furnished details of this project for claiming CFA. It was observed that there were several missing details in the information furnished to KREDL such as date of handing over of the system to the beneficiary, date of commissioning and testing, details of dynamic head, water output, *etc*. The CFA rates prevailing during 2014-15 as per MNRE notification dated 03.11.2014, was ₹ 32,400 per HP[76]. The total amount of subsidy worked out to ₹ 33.22 crore for 2,073 SWPS[77]. As the project was not cleared by MNRE and the procurement was not made through KREDL, the possibility of getting subsidy from GoI was remote. In reply CE (South) stated (October 2016) that the deficiencies observed in MNRE formats were being rectified for claiming CFA.

[76] As applicable for General Category State
[77] SWPS of 5 HP – 2,017 units and SWPS of 3 HP – 56 units

2.13.14 Non-assessment of benefits

We noticed that the authorities failed to ensure that SWPS installed were working optimally and adequate water as envisaged was available for irrigation. We could not assess the benefits realised due to lack of data. The accrual of optimal benefits was doubtful since large numbers of SWPS were installed without feasibility reports and in unfeasible areas.

2.13.15 Conclusion

The programme undertaken was defective on several fronts *i.e.*, absence of guidelines, lack of transparency in selection of beneficiaries, discrimination in sharing of cost, *etc*. Faulty evaluation of tender and acceptance of high rates resulted in extra cost of ₹ 26.74 crore under North Zone. Installation of expensive SWPS in South Zone resulted in extra cost of ₹ 8.22 crore. In both Zones, 1,166 borewells which did not satisfy feasibility norms were fitted with SWPS, 35 of which were located in ground water depleted areas. Payments were released to agencies disregarding the tender conditions and without conducting check measurement. The subsidy of ₹ 33.22 crore extended by GoI may not be realised. No assessment was undertaken to ascertain whether intended benefits were achieved.

2.13.16 Recommendations

We recommend that:

1. For implementation of SCP/TSP schemes, Nodal Department (*i.e.* Social Welfare Department) may be consulted before framing the guidelines.

2. For implementing any Solar power related schemes, KREDL, being the Nodal Agency for renewable energy in the State, may be consulted to ensure that due procedures are followed for claiming available subsidies and correct technical specifications are adopted.

The matter was referred to Government in October 2016; their reply is awaited (December 2016).

2.14 Mismanagement of contract

The Divisional Officer, in violation of codal provision, allowed the contractor to continue with the work without agreeing on rates in respect of work which underwent substantial revision in scope after entrustment, leading to litigation.

As per Paragraph 195 of Karnataka Public Works Departmental Code, if a work undergoes substantial changes with increase in tendered quantities and extra items, the Department has to continue with the existing contract through a binding supplementary agreement, showing rate(s) agreed for revised quantities and extra items to avoid complications in settling the claims of the contractor. Further, Paragraph 193 of the Code *ibid* stipulates that the work be retendered by closing the existing contract, if the contractor refuses to execute the work at the rates provided for in the agreement.

The work of construction of Bridge cum Barrage (BCB) and approach road across the River Ghataprabha near Kataraki village in Bagalkot district was administratively approved (January 2009) by the Government and technically sanctioned (February 2009) by the Chief Engineer, Minor Irrigation (North), Vijayapura (CE) for ₹ 10.92 crore[78]. The work was meant for irrigating 365 hectares of land and providing connectivity. The contract was awarded (November 2009) to a contractor for ₹ 11.38 crore[79] for completion in 18 months. The contractor started the work in March 2010.

As the BCB was to come up in the upstream portion of Almatti dam, the height of the BCB was fixed with reference to Full Reservoir Level (FRL) of Almatti Dam (519.60 metres). The FRL was increased to 524.256 metres in November 2010 by the Krishna Water Disputes Tribunal-II, constituted during 2004. Even before the FRL was increased by the Tribunal, the height of the BCB was increased (April 2010) by CE to the proposed revision in FRL of Almatti Dam. Consequently, the scope of the BCB underwent substantial modification right from the foundation, involving increase in quantities and execution of extra items. A revised project cost for ₹ 19.31 crore as per tender rates was approved (March 2013) by the Government.

The rates approved by the Department were not accepted by the contractor as the scope of the work was modified substantially. However, the Department allowed the contractor to continue the work without concluding a supplementary agreement for the revised scope of work and payments were made at tendered rates. The contractor referred the matter (August 2013) for settlement through Arbitration and preferred claim for a total of ₹ 97.74 crore. The contractor had been paid ₹ 19.79 crore till the end of September 2015. The construction of approach roads could not be taken up due to non-acquisition of land and work remained incomplete.

[78] based on the Schedule of Rates of 2007-08 continued for 2008-09
[79] 14.90 *per cent* above the amount of ₹ 9.91 crore put to tender

Scrutiny of records (November 2015) in the office of the Executive Engineer, Minor Irrigation Division, Vijayapura **(**EE) showed the following failures:

- The Department had designed the height of the BCB reckoning FRL of Almatti dam at 519.60 meter though it was aware of the fact that Government's demand to increase the FRL to 524.256 meter was pending with the Tribunal. Further, within one month of starting of the work and even before the FRL was revised by the Tribunal, the scope was revised citing the proposal to increase the height of Almatti dam.

- After revision in project cost, a supplementary agreement was not concluded with the contractor before proceeding with the work which was a violation of Codal provisions. Non-execution of supplementary contract resulted in the contractor preferring arbitration claim towards workable rates, compensation, *etc.* Further, the Department failed to attend Arbitration proceedings regularly and filed the Statement of Defense on 23 May 2016, as against the due date of 30 March 2015. Delay in concluding arbitral proceedings may result in additional burden of interest to the Department.

- As per contractual provisions, the contractor was eligible for payment of Price Adjustment towards increase or decrease in cost of materials, labour, fuel and lubricants, *etc*., with reference to the value of work executed during the quarter. Scrutiny of the Running Account (RA) bills revealed that the gross value of the work done vide 8th and 11th RA bills was erroneously considered twice for payment of Price Adjustment leading to excess payment of ₹ 71.27 lakh.

- Deduction towards royalty for materials used, aggregating to ₹ 34.76 lakh, though recorded in Measurement Book was not recovered from the RA bills while making payment. This resulted in extending of unintended benefit of ₹ 34.76 lakh to the contractor.

- The land required for forming approach roads had not been acquired by the Department till June 2016 despite award of the work in November 2009. This was the primary reason for non-completion of work till date.

On these being pointed out, EE replied (November 2015, May 2016 and June 2016) that supplementary agreement was executed for extra items and continuation of the work through the same contractor resulted in savings as the work was executed at the Schedule of Rates of 2007-08.

The reply is not acceptable as the supplementary agreement produced to us was signed by the contractor 'under protest' and the contractor had already filed for arbitration claiming an additional ₹ 81.07 crore[80] from the Department. Regarding excess Price Adjustment paid and unrecovered

[80] ₹ 97.74 crore - ₹ 16.67 crore (paid up to August 2013) = ₹ 81.07 crore

royalty charges aggregating to ₹ 1.06 crore, EE agreed to recover the same from the bills pertaining to other works of the contractor. The recovery details are awaited.

The matter was referred to Government in February 2016; their reply is awaited (December 2016).

2.15 Unproductive expenditure on Lift Irrigation Scheme at Ballari

Lift Irrigation Scheme at Ballari which was completed in October 2013 at a cost of ₹ 16.80 crore did not provide irrigation benefit on account of defective design of rising main.

In Lift Irrigation Scheme (LIS), pumping machinery is installed on the foreshore of reservoirs or wells for pumping water and transporting it through pipes (technically known as rising main) to higher elevation for irrigation of lands where water cannot be supplied by gravity. Government had issued (March 2003) guidelines which exhaustively cover all engineering and financial aspects for successful commissioning of LIS. The guidelines emphasise computation of surge pressure[81] by surge analysis for providing adequate control arrangements and also selection of appropriate class of pipes to sustain such combined pressure.

Government approved (March 2007) construction of LIS near Kudgolumatti village in Ballari district to provide irrigation to 2,500 *acres* of land. The contract was awarded (October 2008) to an agency for ₹ 12.04 crore. The work was completed in June 2012 while the work of providing electricity feeder line entrusted to another agency was completed in October 2013. The total expenditure incurred on LIS was ₹ 16.80 crore besides an outstanding liability of ₹ 49.29 lakh towards fixed electricity charges. The trial run was carried out during October 2013.

During regular operation of LIS (August 2014), leakages in the joints of the rising main pipes in the first stage[82] and bursting of pipes in the second stage were noticed. Though repair works were undertaken, similar problems were encountered in the next season as well (August 2015). The issue was referred to experts[83] who recommended for strengthening of surge controlling

[81] When flow of water through a pipe is stopped abruptly by sudden closure of a valve or stopping of the pump, the whole moving column of the water tend to come to rest at once. As a result, a series of expansions and contractions of the flow take place causing pulsating/surging pressure inside the pipe before water comes to rest.

[82] The rising main of the LIS was running in two stages (length of the first stage was 1,230 meters and second stage was 3,480 meters) and Pre-Stressed Concrete (PSC) pipes of 800 mm and 900 mm diameter were provided for the entire reach under each stage.

[83] Shri Ramaprasad, Indian Institute of Science and Shri Narayana Iyengar, Chief Engineer (Retired), Bengaluru Water Supply & Sewerage Board.

measures. An estimate of ₹ one crore[84] for surge controlling measures and for providing MS pipes in the initial reach of 140 meters was approved (March 2016) by the Chief Engineer, Minor Irrigation (North), Vijayapura. Evaluation of tenders received for the balance work was in progress and the LIS is not in operation (September 2016).

Our scrutiny (November 2015) of the records of EE revealed departmental lapses at design and estimation stage which rendered the LIS non-functional. These are discussed below:

- The estimate submitted to Technical Advisory Committee (TAC) for clearance provided for PSC pipes of 12[85] kg/CM^2. TAC instructed to modify this to PSC pipes of 18 kg/CM^2. Though the class of pipes was changed, the adequacy of controlling measures based on surge analysis as required under the guidelines was not ensured by TAC. The Executive Engineer, Minor Irrigation Division, Ballari (EE) reported (March 2015) that design of LIS did not include the essential protection valves (controlling measures)[86] to balance the surge pressure. Thus, Government guidelines that required surge analysis were not followed.

- The guidelines also prescribed that after laying and joining, the pipeline must be pressure tested to ensure that pipes and joints are capable of withstanding the maximum pressure likely to develop under working conditions. There was nothing on record to show that prescribed tests had been conducted by the Department. The Consultants after conducting surge analysis had also reported (October 2015) that the rising mains and pumps had neither been investigated for surge pressure nor adequate surge protection measures were provided during implementation.

- The Consultant recommended providing additional control measures (providing double ball air valves, air cushion valves, surge tank, MS vent pipe, air valve with sluice, *etc* to mitigate surge pressure) and replacement of existing sluice valves with pressure rating valves. Thus, the initial investigation and designing were inadequate.

Thus, non-adherence to guidelines in designing and preparing the estimate for LIS coupled with failure to test the pipeline after laying and joining had rendered the LIS non-functional and rendered expenditure of ₹ 16.80 crore unproductive. Besides liability of ₹ 49.29 lakh towards electric charges (Fixed Demand Charges) on idle LIS was created.

The matter was referred to Government in June 2016; their reply is awaited (December 2016).

[84] ₹ 86.38 lakh for MS pipes and ₹ 12.78 lakh for surge protection valves.
[85] Refers to unit of pressure
[86] The design provided for five air valves, four scour valves, eight sluice valves, eight reflex valves and pressure relief valve

2.16 Avoidable expenditure on flood protection works

Avoidable expenditure of ₹ 3.98 crore for providing anti corrosive treatment to steel besides payment of ₹ 49 lakh for disposal of soil resulted in unintended benefit to the agency.

Construction of a concrete wall along the banks of Tunga river at Shivamogga[87] and Mattur[88] at an estimated cost of ₹ 55.18 crore was approved by the Planning Commission under flood protection works and technically sanctioned (November 2011) by the Chief Engineer, Minor Irrigation (South), Bengaluru (CE). The work was entrusted (30 March 2012) on tender basis to an agency[89] for ₹ 66.16 crore and was to be completed by June 2013. Time extension was granted up to August 2014 due to stoppage of work on account of floods and entrustment of additional quantities/items of work. An amount of ₹ 68.69 crore including ₹ 4.08 crore towards price adjustment was paid (March 2016) to the agency. The work at Shivamogga was completed and at Mattur, it was completed up to 517.50 meter against 1,030 meter planned (March 2016).

Scrutiny of records of the Executive Engineer, Minor Irrigation Division, Shivamogga (EE) revealed lapses which had resulted in avoidable expenditure and unintended benefit and excess payment to the agency as discussed below:

i) During CE's inspection (May 2012) at Shivamogga reach, EE informed that drainage and sullage water enters the river at several reaches of the construction site. The test results of water samples at the work site showed (March 2012) high chloride content (Shivamogga – 1,400 mg/litre; Mattur – 1,050 mg/litre) and presence of other chemicals above permissible limits[90]. To prevent the higher chloride content corroding the steel, Anti Corrosion Treatment (ACT) was to be provided to steel used for reinforcement along the wall up to a height of two meters above foundation. Accordingly, ACT was provided for Shivamogga reaches only and ₹ 3.98 crore[91] were paid to the contractor for ACT of 25,485 quintals (86,688.50 sqm at ₹ 458.78 per sqm) of steel. In response to our enquiry, the CE clarified (June 2015) that the test report was based on IS 456:2000.

We observed that the IS 456:2000 Code relates to the quality of water to be used for reinforced concrete mix and the limits specified in IS 456 relate to use of marine water for concrete works. As sea water or drainage/sullage water would not be used in reinforced concrete mix, threat of corrosion was non-existent. Hence, providing ACT to steel was not necessary[92] and the expenditure of ₹ 3.98 crore on this was avoidable.

[87] 11.754 km to 14.410 km at Shivamogga town
[88] 6.006 km to 7.036 km near Mattur village
[89] M/s Ramalingam Constructions Company (P) Limited
[90] Permissible limit: 250 mg/litre as per test report
[91] 86,688.50 sqm × ₹ 458.78 = ₹ 3.98 crore
[92] ACT to steel was not provided in case of Mattur reach

Government replied (October 2016) that ACT was provided as per IRS[93] Code, which states that concrete in contract with or buried under aggressive sub-soil or in direct contract with liquid aggressive chemicals warranted ACT as chloride could enter the concrete by diffusion from environment and from liquid aggressive chemicals.

The reply is not acceptable as only the quality of water to be used and protection of RCC against aggressive chemicals is specified in IS Codes (IS 456 and 9077). The IS codes recommend that the durability of the concrete structure could be achieved through good and sufficient cover of concrete which also protects from aggressive environmental factors. As stated by the Government in its reply, ACT was to be provided to cement concrete cover while Department had provided treatment for steel. Hence, coating of ACT was not necessary.

ii) The total quantity of ordinary soil excavated at Shivamogga reach was 2,36,999 cum out of which 1,37,000 cum was used for providing casing embankment. The balance quantity available for transportation was 99,999 cum only. However, the Department paid for transportation of 1,29,323 cum of ordinary soil resulting in excess payment of ₹ 48.94 lakh.

On this being pointed out, the Government replied (October 2016) that the quantity of soil suitable for embankment was only 1,07,676 cum and the balance 1,29,323 cum was transported and paid accordingly. The reply is not acceptable as 1,37,000 cum of ordinary soil was used for embankment as per bills and hence 99,999 cum only was available for transportation.

2.17 Improper evaluation of tender

Rationalisation of quoted rates disregarding the prevalent Schedule of Rates while evaluating the tender resulted in failure to obtain additional performance security of ₹ 1.16 crore. Further, ₹ 79.43 lakh was paid in violation of contract conditions.

Estimates are to be prepared based on the rates prescribed in the Schedule of Rates (SR). General notes on SR prescribe that rates for cement, steel and all types of pipes approved by the Superintending Engineer every quarter are to be considered for preparation of estimates and evaluation of tenders. Instructions were issued by Government that additional performance security should be obtained in case of unbalanced rates[94] quoted by the contractor and negotiations should be conducted for lowering the rates.

[93] Indian Railway Standard
[94] Rates quoted by the contractor of more than 5 *per cent* of the updated estimate rates

Executive Engineer, Minor Irrigation Division, Belagavi (EE) invited (June 2010) short term tenders under two cover system for construction of Lift Irrigation Scheme (LIS) near Borgaon village in Chikkodi taluk. The estimated cost of the work was ₹ 4.69 crore (as per SR 2007-08) and the amount put to tender was ₹ 4.35 crore. The technical and financial parts of the single bid received were opened on 21 August 2010 and 28 October 2010 respectively. The contractor had quoted ₹ 6.39 crore which was 47 *per cent* above the estimated rates and the bid contained unbalanced rates for many items. The rates quoted by the contractor were 'rationalised'[95] after negotiation by the Chief Engineer, Minor Irrigation (North) Zone, Vijayapura (CE) and was accepted by the Government.

Agreement was signed (January 2011) by the contractor for ₹ 6.39 crore which was 2.66 *per cent* below the updated cost (as per SR for the year 2010-11) of ₹ 6.57 crore. The work was scheduled for completion by August 2012. The contractor after achieving a financial progress of ₹ 5.60 crore, stopped (August 2013) the work without assigning any reason and did not resume the work despite issue of notices by the EE. The CE rescinded (September 2015) the work at the risk and cost of the contractor two years after stoppage of work. The balance work estimated to cost ₹ 68.91 lakh has not been taken up (September 2016).

Our scrutiny revealed that evaluation of tender was not done properly and undue favour was extended to the contractor as discussed below:

- The accepted tender amount of ₹ 6.39 crore does not work out to 2.66 *per cent* below the updated cost of ₹ 6.57 crore in view of the following:

  The rates for PSC pipes accounted for 57 *per cent* of the updated cost of the work. As per the orders of the Superintending Engineer, Minor Irrigation Circle, Belagavi (SE) dated 30 December 2009, quotations for PSC pipes were obtained (July 2010) by EE and the quoted rate of ₹ 6,920 per Rmtr was approved to work out the updated cost. Our scrutiny showed that this rate was far higher than the rate in SR 2010-11 which was in force when the financial bid was opened (28 October 2010). The rate for PSC pipes as per SR 2010-11 was ₹ 4,010 per Rmtr and the total cost of work as per SR 2010-11 works out to ₹ five crore. Hence, the tender premium with reference to the accepted tender amount of ₹ 6.39 crore works out to 27.95 *per cent*[96] above the updated cost and not 2.66 *per cent* below as projected. Thus, the evaluation of tender was improper.

- Rates for pumps, motor, starter, *etc.*, quoted by the contractor were increased by at least 100 *per cent* and up to 1,400 *per cent* during

[95] Altering the quoted rates without change in overall tender amount

[96] (₹ 6,39,38,977 – ₹ 4,99,72,009) ÷ ₹ 4,99,72,009 × 100 = 27.95 %; considering only the cost of PSC pipes, being the single largest item accounting for more than half of the estimated cost of the work.

rationalisation so that there was no change in the overall amount quoted by the contractor. Details of rates quoted by the contractor and the rate after rationalisation in respect of sample items are given in **Table 2.13** below:

Table 2.13: Details of rates quoted by the contractor and the rate after rationalisation

(in ₹)

Sl No	Item	Rate quoted by the contractor	Revised estimated rate	Rationalised rate	Percentage increase after rationalisation of rate (col 3 to col 5)
-1-	-2-	-3-	-4-	-5-	-6-
1	Deep well turbine pumps (3 nos.)	15,00,000	37,50,000	30,00,000	100
2	Vertical Hallow Shaft Motor (3 nos.)	6,00,000	33,00,000	30,00,000	400
3	Starter (3 nos.)	60,000	8,68,857	9,00,000	1,400
4	Transformer (1 no.)	1,50,000	6,12,963	7,00,000	366
Total		**23,10,000**		**76,00,000**	**229**

- The tender amount of ₹ 6.39 crore quoted by the contractor contained unbalanced rates for many items. The SE recommended (November 2010) award of contract after obtaining additional performance security for unbalanced tenders, as per tender conditions. However, the CE instead of conducting negotiations for lowering the rates quoted by the contractor, 'rationalised' the quoted rates. Out of 102 items in Bill of Quantities, quoted rates for 68 items were decreased to rationalise the rates. Rationalisation of the quoted rates was in violation of Government instructions (December 2002) which benefitted the contractor as he was no longer required to submit additional performance security of ₹ 1.16 crore[97]. When the contractor stopped the work without assigning any reason, Government was put to loss on account of absence of security.

- As per the contract conditions, the contractor was eligible for payment of 80 *per cent* (₹ 3.18 crore) of the cost on supply of pipes, pumps, machineries, electrical equipments, *etc.*, and balance 20 *per cent* on successful commissioning. The EE, however, made full payment of ₹ 3.97 crore before commissioning in violation of the contract conditions. Since the contractor failed to complete the work, this resulted in extending undue benefit of ₹ 79.43 lakh to him.

- Bank Guarantee (BG) for ₹ 31.97 lakh (being five *per cent* of tender amount towards security) valid up to the end of July 2013 was not renewed by the Department. Consequently, the Department could not encash it for adjusting liquidated damages and extra cost.

[97] {₹ 6,166.40 (negotiated rate) *minus* ₹ 4,010 (SR rate)} × 5,400 Rmtr (qty) = ₹ 1,16,44,560

Government stated (December 2016) that the tendered rate(s) was rationalised in the interest of Government and there was no undue benefit extended to the contractor. Further, it stated that the extra cost would be recovered after assessment as the contractor had abruptly stopped the work.

Reply is not acceptable as the overall tender amount remained the same even after rationalisation. Further, rationalisation of rates was not only against the rules, it also exempted the contractor from furnishing additional performance security of ₹ 1.16 crore encashable in the event of non-completion of work, which had happened in this case.

Bengaluru
The

(Bijit Kumar Mukherjee)
Accountant General
(Economic and Revenue Sector Audit)
Karnataka

Countersigned

New Delhi
The

(Shashi Kant Sharma)
Comptroller and Auditor General of India