

Chapter 5

Projects/works execution by DJB

WTP project at Chandrawal was delayed due to non-clearance of site, revisions in DPR, changes in specification of items, non-receipt of approvals from JICA and MoUD. Further in case of Wazirabad WTP, Asian Development Bank had withdrawn the funding due to delay in finalization of tender. Due to not following the NIT/tender conditions the work was awarded to ineligible contractors. In some cases of water/sewerage works, the works were either closed before completion or were not put to use after completion of the project resulting in unfruitful expenditure of ₹ 52.33 crore. Excess payment of ₹ 52.18 crore was made to contractors on account of cost escalation and fixed electricity charges.

Assessment of requirements of water and sewerage projects, timely approval from local bodies and other departments, preparing estimates on a realistic basis, framing NIT conditions and proper tendering process are important parts of planning projects in an essential public service organisation like DJB.

Audit examined selected projects under sewerage and water supply and observed deficiencies in planning and execution stages as discussed in the succeeding paragraphs.

5.1 Construction/rehabilitation of WTPs

5.1.1 Rehabilitation of Chandrawal WTP and its command area

Government of India (GOI)/Delhi Jal Board (DJB) received an ODA (Official Development Assistance) loan from Japan International Cooperation Agency (JICA) amounting to ¥ 28,975 million (₹ 1963 crore) towards Improvement Project (October 2012) in respect of Chandrawal Water Treatment Plant (WTP) and its command area. The project was divided into six packages. Tokyo International Consultancy Services Ltd. (TEC) was appointed (September 2013) as Project Management Consultant (PMC) at the tendered cost of ₹ 70.03 crore with an agreement period of nine years. The construction works/activities of all packages were to be completed by November 2022. Payment of ₹ 57.65 crore was made to the Consultant as of March 2022.

Audit noticed delays at different planning stages as stated below:

Stages	Scheduled time	Delay Months/packages
Preparation of DPR (Stage-I)	Jan 2015 to Aug 2015	9 Months /(Package-II) 17 Months/ (Package-IV) 18 Months/ (Package-V)
Preparation of tender documents (Stage-II)	October 2017 to December 2019	27 Months/ (Package-II) 9 Months/ (Package- III) 19 Months /(Package- IV)

Stages	Scheduled time	Delay Months/packages
		53 Months /(Package- V)
Finalization of tendering process (Stage-III)	Up to November 2016	31 Months /(Package-II) 24 Months/ (Package- III) 31 Months/ (Package- IV)

There were delays at every stage of execution of Packages II to V. Further, DJB decided that NIT for Packages V and VI will be invited after the award of packages II to IV. Work of Package-I had commenced on 2 August 2019 with scheduled completion date as 1 November 2022. The work of package II to IV has not been awarded till 31 March 2022 even after invitation of tender as the tender was either cancelled or re-invited.

Thus, a project conceptualized in 2012 was still in its initial stages of execution even after 13 years raising doubts about the very necessity of the project.

The Division, in its reply (August 2022), accepted the audit observation and stated that the project was delayed owing to revisions in DPRs and implementation of DSR 2014 and 2016, etc. Additionally, there were delays in receiving approvals from JICA and MoUD. Delay in construction under Package-I was due to clearance of site, permission for tree cutting, COVID, etc.

The reply is not acceptable, as all the reasons stated for the delay were administrative in nature. Moreover, the division's reply does not mention the delay in submission of documents by the consultant and non-imposition of penalty on consultant besides granting time extensions beyond the terms of the contract.

5.1.2 Construction of Wazirabad WTP and water supply in command area

Delhi Jal Board approved (March 2014) Delhi Water Supply Improvement Investment Programme in respect of Wazirabad WTP and its command area at a tentative cost of ₹ 2,243 crore. The project was to be funded by the Asian Development Bank (ADB). M/s NJS Consultant Co. Ltd. (Japan) was selected (December 2016) as the project management consultant with a project completion period of 72 months. As per ADB loan requirement, DJB was to achieve project readiness at the time of loan negotiations, requiring contracts worth minimum 30 *per cent* of total project cost to be in award stage. The project was divided into six packages.

Awarding of first package would have met the project readiness requirement for which tenders were issued in August 2017. However, only a single bid was received for Package-I and DJB decided not to evaluate this bid, despite ADB suggesting evaluating the same. Due to non-evaluation of this bid, the project readiness requirement could not be met and loan negotiation could not be done at that time. After much deliberation, ADB agreed to consider rebidding. After re-tendering for Package-1 and tendering for Package-2, Price Bid Evaluation

Report of both projects was sent in November 2019 to ADB and DJB received NOC from ADB for awarding both the works in December 2019.

However, subsequently (June 2020) awarding of both the packages were rejected by the Board. In another flip flop (October 2020), DJB intimated ADB the Board's decision (September 2020) to re-invite tenders to which ADB responded stating that they had withdrawn this project from its pipeline of projects for financing.

Thus, failure of DJB in fulfilling the project readiness requirement, caused by rejection of approved bids and a flip flop by the DJB deprived it of finance for a significant potable water from ADB.

The matter was referred to the Government in July 2023, reply was awaited (April 2025).

5.2 Revision of estimates without justification

Rule 136 (1) of GFR 2017 stipulates that no works shall be commenced until estimates containing the detailed specifications and quantities of various items have been prepared based on the Schedule of Rates maintained by CPWD or other Public Works Organizations and they being sanctioned by the competent authority.

Test check of cases revealed that estimates for works were computed on higher side or without proper technical justification which led to over estimation of project cost as detailed in **Table 5.1**

Table: 5.1: Details of inflated estimates of works

Sl No.	Name of work	Estimates inflated (₹ in crore)	Reasons
1.	O&M of the recycling Plant (Haiderpur-II WTP) For 10 years	3.86	Increase in quantities of PAC and Chlorine without justification.
2.	O&M of raw water pum house (RWPH), Iradat Nagar	1.62	Due to inclusion of desilting work in BOQ against the approval of planning division.
3.	Installation of 200 tube wells	4.98	Increased the size of tube well from 600 mm to 1200 mm without justification.
4.	Installation of 25 tube well	3.80	Due to increasing the size of bore well and casing pipe and including additional items like Collection Chamber etc.
	Total	14.26	

Audit noted that the scope of works were changed in a perfunctory and arbitrary manner without any justification and in violation of GFR provisions.

5.3 Irregularities in award of works

Para 5.1.1 of the Manual of Procurement of Works 2019, issued by the Department of Expenditure, M/o of Finance, GoI stipulates that evaluation of bids is one of the most significant areas of purchase management and the bid

evaluation process must be transparent. All tenders are to be evaluated strictly on the basis of terms and conditions incorporated in the tender documents.

Audit observed lack of compliance with the provisions of the Manual by DJB during award of tenders as detailed in **Table 5.2**.

Table 5.2: Details of irregular award of works

Sl No.	Nature of irregularity	Name of work	Cost of work (₹ in crore)	Remarks
1.	Violation of Prior experience and financial criterion	1. O&M ¹ of 16 MGD recycling plant and WTP at Haiderpur	39.62	Firm was not having the requisite experience in O&M of a recycling plant.
		2. O&M of 55 MGD Iradat Nagar raw water intake pump house	28.68	Firm was not having experience and did not fulfil the financial criteria as per NIT conditions.
		3. Rejuvenation of water bodies.	39.78	Contractor sub-let the work to ineligible contractors.
		4. Rehabilitation of peripheral sewer in North and North-West Delhi.	57.17	Firm had no experience in the work of CIPP lining method.
2	Preparation of incorrect justification to show compliance of permissible limit ² of CPWD manual.	Rehabilitation and O&M of Sonia Vihar WTP for 10 years.	147.00 ³	The work was awarded on the basis of justification cost (JC) (₹152.16 crore) inflated by reducing the quantities of cheaper items and increasing those of costlier ones. On the basis of quantities mentioned in the tender, the JC worked out to ₹127.89 crore, which would have rendered the bid unjustified (15 per cent above JC).

Thus, works were awarded to contractors who did not fulfil the tender conditions and at unjustified rates impacting the quality of works as well as causing avoidable financial burden on the Board.

The matter was referred to the Government in July 2023, reply was awaited (April 2025).

5.3.1 Splitting of works

Rule 137 of GFR provides that for the purpose of approval and sanctions, a group of works which forms one project, shall be considered as one work.

¹ Operation and Maintenance

² Para 20.4.3.2 of CPWD manual 2014 stipulates that variation up to 5 per cent over the justified rates may be ignored. Variation up to 10 per cent may be allowed for peculiar situations and in special circumstances. Reasons for doing so shall be placed on record. Tenders above this limit should not be accepted.

³ ₹ 6.60 crore for rehabilitation work and ₹ 140.40 crore for operation and maintenance for 10 years.

The rule basically cautions against splitting of works so as to avoid sanction of the higher authorities.

Audit noticed that in four divisions⁴, works of similar nature amounting to ₹ 5.75 crore were not grouped to form one project. The works were thus split to avoid obtaining approval of the next higher authority.

DJB stated (May 2023) that the splitting of works was not done deliberately citing reasons of paucity of budget and preparation of estimates as per the site requirement by the different JE/AEs in-charge of different areas.

DJB's reply is not acceptable as the Executive Engineer is the primary tendering authority of the division and estimates obtained from JE/AEs of different areas should have been clubbed at Executive Engineer level while putting the works to tender.

5.4 Irregularities in execution of works

Irregularities observed in execution of works by DJB are discussed in the succeeding paragraphs.

5.4.1 Undue benefit to contractor

Audit observed that DJB provided undue benefits to contractors in three cases as detailed in **Table 5.3**.

Table 5.3: Undue benefit to contractors

Sl. No.	Details of Work	Amount Involved (₹ in crore)	Reason of anomaly
1.	Rehabilitation and up-gradation of 182 MLD Wastewater Treatment Plant (WWTP), Rithala	0.14	The WWTP never achieved the prescribed standards i.e. BOD ≤ 20 mg/l, TSS ≤ 30 mg/l during February 2020 to March 2021. However, liquidated damages of ₹ 14 Lakh was not recovered as per agreement.
2.	Construction of 16.5 ML capacity UGR/BPS at Karala including O&M	2.15	O&M costing ₹ 2.9 crore was sub-let at just ₹ 75 lakh without prior approval of DJB in violation of contract conditions resulting in undue benefit to contractor of ₹ 2.15 crore.
3.	Construction of UGR/BPS at Mahipalpur	1.04	DJB did not record actual quantity of completed work in measurement book and Payment of ₹1.04 crore was released based on the percentage of work in lump-sum instead of actual quantity.
	Total	3.33	

The matter was referred to the Government in July 2023, reply was awaited (April 2025).

5.4.2 Unfruitful/Wasteful expenditure

Audit observed in the following four cases that foreclosures and additional purchases outside the scope of work caused DJB to incur unfruitful/wasteful expenditure of ₹ 52.33 crore as detailed in **Table 5.4**.

⁴ Executive Engineer (E&M)-8, 9, 10 and 11.

Table 5.4: Wasteful and Unfruitful expenditure

Sl. No.	Details of Work	Amount Involved (₹ in crore)	Reason of anomaly
1.	P/L of water main from Ranney well W1 and W2 to Sonia Vihar UGR	1.15	After construction of the water mains, the same was not connected to Ranney well W1 and W2. Further as per water testing report, water of Ranney well W2 was also not fit for drinking rendering the expenditure unfruitful.
2.	Improvement in service level for water supply in Mehrauli and Vasant Vihar Project areas.	25.04	The project was aimed at providing water supply for eight hours a day by improving the existing infrastructure. However, the work was stopped even before the civil work was completed.
3.	laying of MS/DI feeder main and distribution mains for Bijwasan and Rajokari UGR/BPS	23.29	The work of laying the pipeline was stopped after the expiry of the contract period without completing, rendering expenditure of ₹ 23.29 crore wasteful.
4.	Rejuvenation of water bodies using floating rafter (Phase-I)	2.50	As per site conditions, 1839 floating rafters were required in six water bodies which were supplied and installed by DJB. Additional 1,375 floating rafters procured at a cost of ₹ 2.50 crore was lying unused resulting in unfruitful expenditure.
5.	SITC ⁵ of FRP sealing structure at Kondli STP	0.35	An item in this work namely “covering of odour generating units of the STP with FRP” was already included and executed under other work. This duplication resulted in overlapping of work and led to unfruitful expenditure to the tune of ₹ 34.63 Lakh.
	Total	52.33	

The matter was referred to the Government in July 2023, reply was awaited (April 2025).

5.4.3 Excess / avoidable expenditure

Audit noticed that in five works, DJB incurred excess / avoidable expenditure worth ₹ 40.88 crore due to improper planning and non-achievement of target within stipulated time. Apart from this, DJB also made an additional payment of ₹ 11.30 crore on account of cost escalation due to delay in completion of project and further due to cost escalation in three cases. Details of these cases are given in the **Table 5.5**.

⁵ Supply, installation, testing and commissioning.

Table 5.5: Cases of excess and avoidable payment to contractors

Sl. No.	Nature of anomaly	Details of Work	Amount Involved (₹ in crore)	Reason of anomaly
1	Excess / avoidable expenditure	Improving service level in water supply for command area under Malviya Nagar UGR	1.71	As the target of Coverage of water supply from 84 <i>per cent</i> to 100 <i>per cent</i> was not achieved within time, So DJB had to supply water through tankers incurring an expenditure of ₹ 1.71 crore from May 2015 to May 2022.
2		Improvement and revamping of existing water supply, transmission and distribution network under Nangloi WTP	39.17	Inordinate delay in execution of project resulted in the extension of time of the project which led to payment on account of cost escalation amounting to ₹ 39.17 crore to the contractor.
3	Excess / Over-payment	DBO of 45 MGD STP at Kondli	0.11	Excess payment of cost-escalation due to application of wrong cost index.
4		Construction of 564 MLD WWTP at Okhla	2.38	As per contract agreement, the price quoted were inclusive of GST. But while calculating 'cost of work done' for cost escalation, GST was not excluded and escalation was paid on the amount inclusive of GST. Due to this an excess payment of ₹ 2.38 crore was made to firm.
5		Rehabilitation and up-gradation of Rithala phase-I WWTP	8.81	Payment of ₹ 8.81 crore on account of cost-escalation was made to contractor though the same was not payable as per Rule 225 (viii) (f) of General Financial Rules, as the contractor was paid interest-free mobilization advance
Total			52.18	

The matter was referred to the Government in July 2023, reply was awaited (April 2025).

5.4.4 Non-Deduction of Statutory recovery

Audit observed that statutory recoveries of ₹ 1.51 crore were not deducted in five cases as detailed in Table 5.6.

Table 5.6: cases of Non-deduction of statutory taxes from contractor’s bills

Sl. No.	Details of Work	Amount Involved (₹ in Lakh)	Audit observation
1.	Supply/Installation and operation and maintenance of 39 flow meters	1.84	No tax was deducted from contractor bills under section 194C of Income Tax act.
2.	Departmental fee/professional fee for higher supervision	45.92	No tax was deducted from contractor bills under section 194J of Income Tax act.
3.	22 works of HP-II and EE (E&M-I) divisions	14.36	Labour cess @ 1 per cent was not recovered from contractor bill as per Building and Other Construction Worker’s Welfare Cess Act 1996.
4.	Improving service level in water supply for command area under Malviya Nagar UGR	88.94	TDS on GST not deducted under Section 51 of CGST Act 2017
	Total	151.06	

The matter was referred to the Government in July 2023, reply was awaited (April 2025).

5.4.5 Other Irregularities

The following anomalies were also observed during the execution of sewer and water works executed by DJB:

- DJB order (August 2011) on reduction of electricity charges stipulated that, as far as possible, the maximum demand⁶ should be close to the contract demand⁷ (with 10 per cent buffer). However, in 11 cases, excess expenditure of ₹ 1.08 crore on account of fixed electricity charges was detected as the sanction load was much more than the maximum demand.
- As per the conditions of contract, wherever employer’s water is made available to the contractor for construction and drinking purpose, recovery @ one per cent of the gross amount of civil works shall be made. In three test checked cases, water charges amounting to ₹ 1.13 crore were not found recovered from the contractors despite non-availability of water bills on record.
- In two cases, interest free mobilization advances amounting to ₹ 33.27 crore were provided to the contractors in violation of the norms which provide for 10 per cent simple interest.

⁶ Maximum demand means the highest average load measured in kilo volt ampere (KVA) or kilo watt (KW) at the point of supply of a consumer during a consecutive period of thirty minutes.

⁷ Contract demand means the demand in KW or KVA as provided in the agreement.

- In the work of improvement in service level for water supply in Mehrauli and Vasant Vihar Project areas, secured advance amounting to ₹ 37.44 lakh was found unadjusted. Unapproved deviations in BOQ from original sanctioned work of worth ₹ 1.78 crore was also observed.
- Loss of interest worth ₹ 52.53 lakh due to irregular advance payment was observed in the work of construction of 318 MLD (70 MGD) WWTP Coronation Pillar as DJB released more payment than due as per the payment schedule.
- Delays ranging from 6 to 91 months were observed in the execution of six works of providing & laying internal and peripheral sewer line in various colonies/group of colonies worth ₹ 205.09 crore.
- Interceptor Sewer Projects (ISP) worth ₹ 1395 crore was delayed more than 11 years as only four packages (out of six) were handed over to DJB.
- DJB sanctioned the 2nd Phase of Dwaraka STP (July 2018) with a capacity of 50 MGD with plans to use the effluent water from STPs⁸ and diverting some of the raw water presently being supplied to Wazirabad WTP to Dwarka WTP. The work was awarded in August 2021 for ₹ 280.78 crore with completion date of May 2023. However no such arrangement was made by DJB for raw water for WTP till date and construction work was still under progress. Thus even if the project is completed, commissioning of the WTP is doubtful due to unavailability of raw water.

The matter was referred to the Government in July 2023, reply was awaited (April 2025).

⁸ The water through various STPs was to be discharged into river Yamuna near Palla (entry point in Delhi). Thereafter, it would be allowed to flow in the river course before being lifted from Wazirabad pond for treatment at Wazirabad WTP and Chandrawal WTPs to potable water standards.