सत्यमेव जयते

Compliance Audit Report of the Comptroller and Auditor General of India for the year ended 31 March 2021

(Environment, Public Works, Energy and Industries Departments)

SUPREME AUDIT INSTITUTION OF INDIA

लोकहितार्थ सत्यनिष्ठा

Dedicated to Truth in Public Interest

Government of Madhya Pradesh

Report No. 2 of the year 2023

Compliance Audit Report of the Comptroller and Auditor General of India

for the year ended 31 March 2021
(Environment, Public Works, Energy and Industries Departments)

Government of Madhya Pradesh
Report No.2 of the year 2023

Table of Contents

Preface

This Report of the Comptroller and Auditor General of India for the year ended 31 March 2021 has been prepared for submission to the Governor of Madhya Pradesh under Article 151 of the Constitution of India for being laid in the State Legislature.

This Report contains significant findings of audit of expenditure of Departments of Government of Madhya Pradesh. Audit has been conducted under the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971.

The instances mentioned in this Report are those, which came to notice in the course of test audit for the period 2020-21 as well as those which came to notice in earlier years, but could not be reported in the previous Audit Reports; instances relating to the period subsequent to 2020-21 have also been included, wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

EXECUTIVE SUMMARY

Executive Summary

I General

This Report contains four Compliance Audits paragraphs relating to audit of "Fund Management and Construction & Upgradation of Major District Roads through New Development Bank Loan in Madhya Pradesh", "Implementation of State Rural Drinking Water Programme in Madhya Pradesh", "Construction, Operation & Maintenance of Power House-II of Shree Singaji Thermal Power Station, Khandwa of Madhya Pradesh Power Generating Company Limited" and "Diversion of Forest Land and Management of Compensatory Afforestation Funds in Madhya Pradesh". The aggregate value of the audit observations of the Report is ₹ 2,855.69 crore.

- **Expenditure of Departments**

It was observed that as of 31 March 2021, the expenditure of Departments covered in this Report stood at ₹ 47,490.09 crore. Of this amount, ₹ 15,010.41 crore relating to Finance Department and ₹ 10,818.55 crore relating to Energy Department together accounts for more than 50 *per cent* of the total outlay of all the 18 Departments put together.

(Paragraph 1.3)

- **Response of Departments to Audit findings**

Heads of Offices and their reporting authorities are required to respond to the observations contained in Inspection Reports and take appropriate corrective action. As of 31 March 2022, a total of 2,972 Departmental IRs and 18,186 paragraphs as well as a total of 344 IRs and 2,316 paragraphs of the PSUs (other than Revenue Departments) pertaining to previous years were pending settlement.

(Paragraphs 1.6.1 and 1.6.5)

- **Response of the Government to recommendations of the Public Accounts Committee (PAC)**

Administrative Departments are required to submit Action Taken Notes (ATNs) on the recommendations of the Public Accounts Committee (PAC) within six months from the date of receipt of the recommendations. As of 31 March 2022, 35 ATNs in respect of various Departments (other than Revenue Departments) of the Government of Madhya Pradesh were yet to be received.

(Paragraph 1.6.4)

- **Response of the Government to recommendations of the Committee on Public Sector Undertakings (CoPU)**

Thirty-three ATNs on the Recommendation Reports of the CoPU, in respect of 17 of the Audit Reports for the period 1973-74 to 2015-16 pertaining to five departments were not received till 31 March 2022.

(Paragraph 1.6.5)

II Public Works Department

"Fund Management and Construction & Upgradation of Major District Roads through New Development Bank Loan in Madhya Pradesh"

- **Creation of financial liability**

As per Clause 14.8 of General Conditions of Contract, if the contractor does not receive payment in accordance with Sub-clause 14.7 of the contract data, the contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during the period of delay. Audit observed that as against the total value of work done amounting to ₹ 607.38 crore by contractors, an amount of ₹ 226.79 crore ranging from four *per cent* to 100 *per cent* was withheld from the Running Account Bills. This resulted in creation of financial liability of ₹ 3.31 crore.

(*Paragraph 2.5.1*)

- **Execution of below specification work**

As per Clause 6.5 of IRC:94, the Dense Bituminous Macadam surface can be opened for traffic after being covered by a suitable wearing course and when it has cooled down to the surrounding temperature. Audit observed that contrary to the specification, the Dense Bituminous Macadam surface was covered by the next course, Bituminous Concrete after a lapse ranging between one month and 15 months, without laying any other course in between to protect the Dense Bituminous surface. This resulted in below specification work worth ₹ 54.15 crore.

(Paragraph 2.7.2)

- **Short deduction of royalty from contractors**

As per Rule 68(1) of Madhya Pradesh Minor Mineral Rules, 1996 and orders of the Government (February 2003), the final bill of the contractors shall be paid for the work only upon production of No Dues Certificate of royalty issued by the Mining Department, failing which, the royalty will be deducted from the bills and deposited in the Mining Head. Audit observed that royalty of ₹ 31.74 crore was to be recovered from the contractors for the minor minerals used in the works, but ₹ 15.22 crore only were recovered. This resulted in short deduction of royalty amounting to ₹ 16.52 crore.

(Paragraph 2.7.3)

III Public Health Engineering Department

"Implementation of State Rural Drinking Water Programme in Madhya Pradesh"

- **Non-ensuring sustainability of water source by Nigam**

As per Para 9.1 of Manual, it shall be ensured that selected water sources shall be capable of meeting 100 *per cent* water requirement of the system for the entire design period of 30 years. Audit observed in eight Schemes that the sustainability of water sources was not ensured by the Nigam throughout the year, as it was observed that for 72 days to 171 days, no water was available in the respective water source for 111 days to 297 days the available water was less than the immediate requirement of the Schemes.

(Paragraph 3.4.4.1)

- **Delays in execution of work**

As per Clause 13 of the "Conditions of Contract" of the executed Agreements for implementation of Schemes, the whole work was to be completed in all respect within 18 to 24 months from the date of issue of the order for commencement of work. Audit observed that out of 147 works only eight works were completed in time whereas the median delay in completed works was of 257 days, while in on-going works, it was 851 days. Out of 18 Schemes, 12 Schemes were completed with a median delay of 586 days and in six ongoing Schemes, the median delay was 756 days.

(Paragraph 3.6.3)

- **Irregular release of Bank Guarantee**

As per Clause 3.5 of Part-III of the Agreement, the security to be taken for due performance of the contract will be equal to 10 *per cent* of the amount of the contract in the form of Bank Guarantee of a Nationalised/ Scheduled bank valid up to one year after the date of completion of the work. Audit observed that Bank Guarantee of ₹ 14.53 crore was released to the contractors even before completion of the works. In 50 works of four Divisions, Bank Guarantee worth ₹ 2.44 crore was released either before completion of operation & maintenance period or before completion of the works.

(Paragraphs 3.6.7 and 3.6.8)

IV Energy Department

"Construction, Operation & Maintenance of Power House-II of Shree Singaji Thermal Power Station, Khandwa of Madhya Pradesh Power Generating Company Limited"

- **Delay in various stages of Project led to foregoing of Return on Equity benefit**

The Company failed to schedule the Project approval and execution schedule in conformity with the MPERC regulations so as to gain additional RoE. The procedural delay in achieving Commercial Operation Date (CoD) from the stipulated time period deprived the Company of the benefit of additional RoE to the extent of ₹ 120.75 crore during the life (25 years) of the power plant.

(Paragraph 4.8.1)

- **Avoidable payment of water charges ₹ 67.80 crore**

Company obtained (August 2013) the allocation of water from Water Resource Department (WRD) for supply of water to both PH I and II. However, the Unit 3 was commissioned in November 2018, and the Company had to pay ₹ 67.80 crore towards water charges without consuming any water.

(Paragraph 4.8.2)

- **Forgone Interest During Construction (IDC)/ Incidental Expenditure During Construction (IEDC) claims due to delay in payment of advance to Contractor**

The Company issued LOA on 04 September 2014 and paid the initial advance of ₹ 375.07 crore to contractor during December 2014 to June 2015. As the Company delayed the payment of advance for more than 60 days, MPERC disallowed (May 2021) the IDC of ₹ 185.47 crore and IEDC of ₹ 29.56 crore for a period of 118 days.

(Paragraph 4.9.1)

- **Reduction in GCV between Loading ends at mines and Unloading end at TPS**

GCV of coal decreased from the 'as billed' stage to the 'as received' stage, though as per CEA, the GCV values, i.e., GCV 'as billed', 'as received' should be approximately same. During 2018-19 to 2021-22 (August 2021), there was drop in GCV up to 2,913 kcal/kg valuing ₹ 71.54 crore.

(Paragraph 4.12.1)

- **Shortage of coal led to loss of Generation and reduction in claim of fixed cost**

The Company failed to arrange continuous and sufficient supply of coal leading to shortage of coal and operation of plant at partial load causing loss of generation during December 2018, April 2019 to June 2019 and again in April and May 2021 resulting in generation loss to the extent of 724.59 MUs and consequential fixed cost to the extent of ₹ 90.92 crore**.**

(Paragraph 4.12.2)

- **Failure of Turbines installed in PH- Losses led to non-recovery of fixed cost**

The start of the operation of units without the adequate facilities required for monitoring of water and steam chemistry led to failure of turbine and outages of units for a long period leading to loss of ₹ 1,044.38 crore in the form of non-recovery of fixed cost during the period of shut down.

(Paragraph 4.13.1)

V Forest Department

"Diversion of Forest Land and Management of Compensatory afforestation funds in Madhya Pradesh"

- **Transfer and use of diverted forest land**

As per Part-II of Form 'A' prescribed under Rule 6 of Forest Conservation Rules, 2003, while seeking diversion of forest land for non-forestry purposes, it is the responsibility of DFO to verify the requirement of forest land and certify that it is unavoidable and barest minimum for the project. The Department diverted 2,731 Ha of forest land in favour of Narmada Valley Development Corporation for Sardar Sarovar Project in September 1987. However, 2,809.943 Ha forest land was submerged under the Project. Despite lapse of several years, revised sanction of MoEFCC was not obtained.

(Paragraph 5.7.2)

- **Short recovery of Compensatory Afforestation costs**

Chief Conservator of Forests (Land Survey) issued (February 2002) instructions for preparation of DPR and stated that Divisions would prepare DPR as per site specific requirements and in accordance with that monies would be demanded from User Agency. Audit observed that the Department incorporated incorrect rates in the DPR and failed to recover Compensatory Afforestation costs amounting to ₹ 4.05 crore from the User Agencies.

(Paragraph 5.7.7.2)

- **Expenditure on ineligible activities under CAMPA**

As per proceedings of the 5th Meeting of the National CAMPA Advisory Council (January 2015), normal forest activity in a State should be undertaken from the State's own plan funds and there should be no attempt to shift the obligation in respect of such items of works to the CAMPA. Expenditure on purchase of vehicle, construction of buildings, *etc*., were not permitted from CAMPA funds. The Department irregularly incurred expenditure of ₹ 53.29 crore on ineligible activities which could not be linked to any of the activities envisaged for Compensatory Afforestation.

(Paragraph 5.10.2)

- **Irregular expenditure on plantations using CAMPA fund**

National CAMPA while approving (June 2019) the Annual Plan of Operation reiterated that if the forest under the management control of Madhya Pradesh State Forest Development Corporation Limited has to be regenerated from the NPV component of CAMPA fund, then it should be managed for ecological restoration and not for commercial exploitation of the forest. Audit observed that an expenditure of ₹ 29.58 crore was irregularly incurred on plantation of teak which was a commercial activity not permissible under Compensatory Afforestation.

(Paragraph 5.10.3)

- **Non-receipt of Self-monitoring Reports**

According to Guidelines issued (January 2014) by the MoEFCC, every User Agency in whose favour forest land has been diverted for non-forest purpose, shall prepare an annual Self-monitoring Report on compliance with conditions stipulated in each approval accorded under the FCA, 1980 in January of the next calendar year. Audit observed in 678 land diversion cases that Self-monitoring Reports had not been obtained by the Department from the User Agencies. This indicated inefficient monitoring and indifference towards restoration of damages to the ecology and environment on account of diversion of forest land.

(Paragraph 5.11.4.3)

CHAPTER - I
GENERAL

Chapter-I
GENERAL

1.1 About this Report

This Report of the Comptroller and Auditor General of India (CAG) contains matters arising from Compliance Audit of four Departments, out of the five[1] audited Departments of the Government of Madhya Pradesh (GoMP) under the purview of the Office of Accountant General[2] (Audit-II), Bhopal.

The primary purpose of this Report is to bring to the notice of the State Legislature, significant results of Compliance Audit of the above Departments. The findings of audit are expected to enable the Executive to take corrective action, to frame appropriate policies as well as issue directives, that will lead to improved financial management of organisations, and contribute to better governance.

This Chapter explains the planning and coverage of audit, response of the Departments and Government to audit findings and follow-up action on previous Audit Reports.

1.2 Office of the Accountant General (Audit-II)

There are 54 Departments functioning under the Government of Madhya Pradesh. These Departments are headed by Additional Chief Secretaries/ Principal Secretaries, who are assisted by Heads of the Departments and subordinate officers under them.

The Office of Accountant General (Audit-II), Bhopal conducts the audit of 21 out of the 54 Departments. Besides, it also audits 58 Public Sector Undertakings, five Autonomous Bodies and two Statutory Corporations.

The Audit offices were restructured in June-July 2020, whereupon the concept of Audit Management Group (AMGs) was introduced.

After restructuring of the Audit Offices, the office of Accountant General (Audit-II), Bhopal is entrusted with the following departments:

Key Departments	Audit Management Group (AMG)
Forest & Environment, Science & Technology	AMG-I
Urban Local Bodies, Transport, Culture, Tourism	AMG-II
State Finance, Commercial Taxes, Mineral Resources, Industries, Commerce	AMG-III
Public Works, Public Health, Energy	AMG-IV

[1] Public Works Department, Public Health Engineering Department, Energy Department, Forest Department and Industrial Policy and Investment Promotion (Industries) Department.

[2] The Compliance Audit of Urban Development and Housing Department was also conducted by this office. However, the same is included in the combined Urban Local Bodies Report prepared by the office of Principal Accountant General (Audit-I), MP, Gwalior.

Audit of the Departments under these Groups includes audit of Administrative Offices of the State Government Departments, their subordinate offices, Public Sector Enterprises, Local Bodies and Autonomous Bodies under the administrative control of the Departments.

1.3 Expenditure details of the Auditee Departments

Expenditure of Departments

A summary of the expenditure incurred by the various Departments of Government of Madhya Pradesh falling within the audit purview of the Office of Accountant General (Audit-II), Bhopal, during the three-year period 2018-19 to 2020-21, is given in **Table 1.1** below:

Table 1.1: Expenditure of Other than Revenue Departments under audit purview of Office of AG (Audit –II), Bhopal

(₹ in crore)

S. No.	Name of the Department	2018-19	2019-20	2020-21
1.	Forest	2,437.90	1,993.88	2,503.52
2.	Science and Technology	175.73	70.97	150.83
3.	Urban Development and Housing	5,739.50	4,608.33	5,661.58
4.	Culture	230.07	147.73	146.64
5.	Tourism	170.53	155.40	100.95
6.	Industrial Policy and Investment Promotion	767.22	850.43	895.30
7.	Micro, Small and Medium Enterprises	780.85	817.98	483.50
8.	Finance	12,280.90	12,288.40	15,010.41
9.	Cottage and Rural Industry	191.84	121.60	92.09
10.	Planning, Economics and Statistics	228.95	211.27	79.40
11.	Energy	12,682.46	8,177.02	10,818.55
12.	New and Renewable Energy	257.92	109.26	60.41
13.	Public Works	8,647.47	7,886.39	6,882.08
14.	Public Health Engineering	2,530.04	2,990.54	4,499.13
15.	Environment	54.74	27.15	41.02
16.	Spirituality	189.06	55.08	39.20
17.	Civil Aviation	27.79	26.84	25.10
18.	Overseas Indian	0.39	0.05	0.38
	Total	**47,393.36**	**40,538.32**	**47,490.09**

Source: *Data collected from Finance and Appropriation Accounts of GoMP for the relevant years.*

1.4 Authority for Audit

The CAG's authority for audit is derived from Articles 149 and 151 of the Constitution of India and CAG's (Duties, Powers and Conditions of Service) Act, 1971 (DPC Act). The CAG audits the Government Departments and Public Sector Enterprises as per the following provisions:

- Audit of expenditure of the Departments is carried out under Section 13 of the DPC Act;
- Supplementary Audit of financial statements of Government Companies is carried out in accordance with the provisions of Section 143(6)(a) of the Companies Act, 2013;
- Audit of Receipts of the Departments is carried out under Section 16 of the DPC Act;

- Financial audit of Autonomous Bodies (ABs) is carried out as per Sections 19(2)[3] and 19(3)[4] of the DPC Act; and

Principles and methodologies for various audits are prescribed in the Auditing Standards and the Regulations on Audit and Accounts, as well as guidelines, manuals and instructions by or on behalf of the CAG.

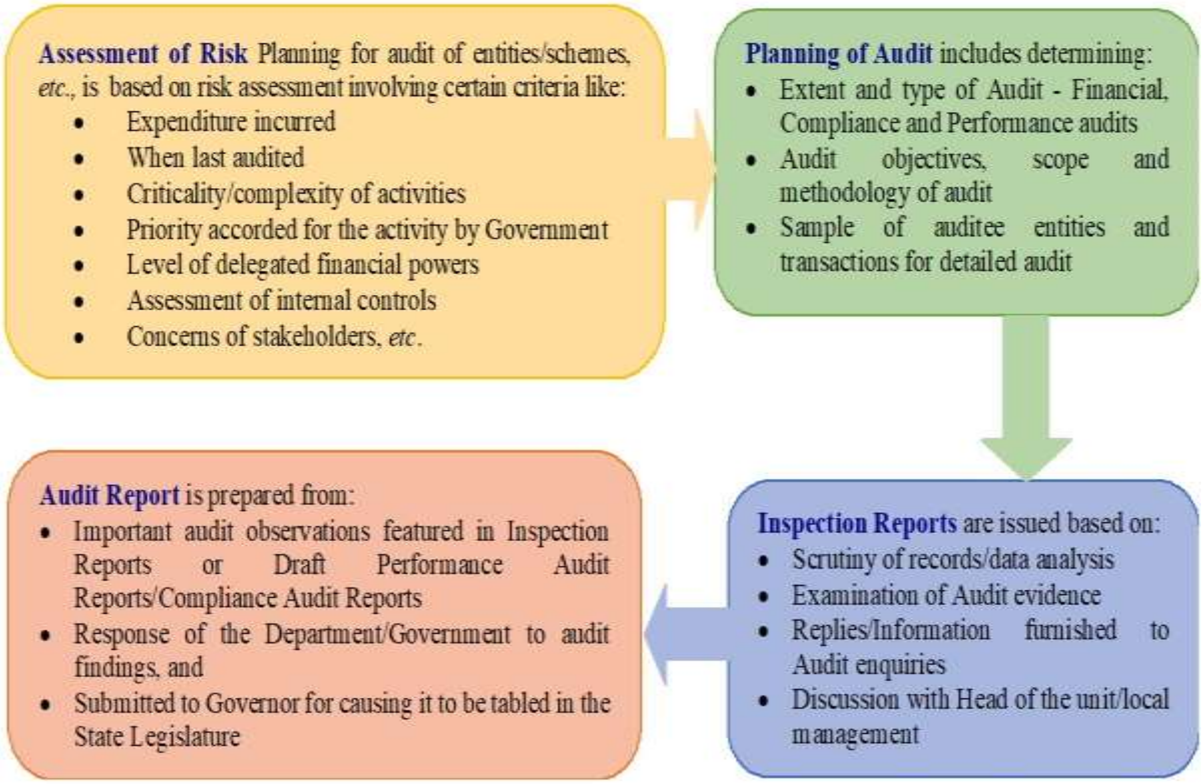
1.5 Planning and Conduct of Audit

During the year 2021-22, the office of Accountant General (Audit-II), Bhopal conducted compliance audit of 177 units out of a total of 1805 auditable units amongst 18 Departments (Other than Revenue Departments). This Report features findings on four audit topics under four departments (Para 2.1 to 5.12 of this Report).

Compliance Audit is an independent assessment of whether a given subject matter (an activity, financial or non-financial transaction, information in respect of an entity or a group of entities) complies in all material respects with the applicable laws, rules, regulations, established codes, *etc.*, and the general principles governing sound public financial management and the conduct of public officials.

The following flowchart depicts the process of planning, conduct of audit and reporting the results of audit:

Chart 1.1: Planning, conduct of audit and reporting



After the completion of compliance audit of each unit, an Inspection Report (IR) containing audit findings is issued to the head of the unit with a request to furnish replies within one

3 Audit of accounts of Corporations (not being Companies) established by or under law made by the Parliament in accordance with the provisions of the respective legislations.

4 Audit of accounts of Corporations (not being Companies) established by or under law made by the State Legislature in accordance with the provisions of respective legislations.

month of receipt of the IR. Whenever replies are received, audit findings are either settled or further action for compliance is advised. Significant audit observations pointed out in these IRs, which require attention at the highest level in Government, are issued as Draft Paragraphs/ Performance Audits/Compliance Audits to the Government for their response, before possible inclusion, after due consideration of the responses, in the Audit Reports. These Audit Reports are submitted to the Governor of Madhya Pradesh under Article 151 of the Constitution of India for causing them to be laid on the Table of the State Legislature.

1.6 Response of Departments to Audit findings

1.6.1 Response to previous Inspection Reports

Heads of Offices and next higher authorities are required to respond to the observations contained in Inspection Reports and take appropriate corrective action. Audit observations communicated in IRs are also discussed at periodical intervals in meetings at District/State levels by officers of the Accountant General's office with officers of the Departments concerned.

As of 31 March 2022, a total of 2,972 Departmental IRs and 18,186 paragraphs (excluding PSUs) pertaining to previous years were pending settlement as detailed below in **Table 1.2**.

Table 1.2: Details of outstanding IRs/paragraphs of other than Revenue Departments at the end of March 2022

S. No.	Name of the Department	IRs	Paras
1.	Forest	221	2,609
2.	Science and Technology	10	56
3.	Urban Development and Housing	1,614	9,426
4.	Culture	115	460
5.	Tourism	04	31
6.	Industrial Policy and Investment Promotion	05	19
7.	Micro, Small and Medium Enterprises	42	218
8.	Finance	319	854
9.	Cottage and Rural Industries	09	30
10.	Planning, Statistics and Economics	101	373
11.	Energy	32	100
12.	New and Renewable Energy	05	17
13.	Public Works	359	2,939
14.	Public Health and Engineering	80	850
15.	Environment	37	121
16.	Spirituality	04	12
17.	Civil Aviation	15	71
18.	Overseas Indian	00	00
	Total	**2,972**	**18,186**

Lack of action on IRs and audit paragraphs is fraught with the risk of perpetuating serious financial irregularities pointed out in these reports. It may also result in dilution of internal controls in the governance process, inefficient and ineffective delivery of public goods/ services, fraud, corruption and loss to public exchequer. Therefore, the State Government needs to institute an appropriate mechanism to review and take expeditious action to address the concerns flagged in these IRs and audit paragraphs.

1.6.2 Response of the Government to Audit observations

All Departments are required to send their responses to Draft Audit Paragraphs proposed for inclusion in CAG's Report within six weeks of their receipt. During December 2021 to February 2022 four Compliance audit paragraphs were forwarded to the Additional Chief Secretaries/Principal Secretaries/Secretaries of the Departments concerned, drawing their attention to the audit findings and requesting them to send their response within six weeks. It was brought to their personal attention that these paragraphs were likely to be included in the Audit Report of the CAG of India, which would be placed before the State Legislature and it would be desirable to include their comments/responses to the audit findings. The responses of the Government, wherever received, have been appropriately incorporated in the Report.

1.6.3 Response of the Government to Audit Paragraphs that featured in earlier Audit Reports

Administrative Departments are required to submit Explanatory Notes on paragraphs and Performance Audits included in Audit Reports, within three months of their presentation to the State Legislature, duly indicating action taken or proposed to be taken. For this purpose, the Departments are not required to wait for any notice or call from the Public Accounts Committee.

As of 31 March 2022, Explanatory Notes were yet to be received from two Departments (other than Revenue Departments) in respect of 04 paragraphs that featured in the Audit Reports for the years 2014-15 to 2018-19. Details are given below in **Table 1.3**.

Table 1.3: Pending departmental replies on the paragraphs included in CAG Audit Report

Year of Audit Report	Department	Departmental replies pending as of 31.03.2022	Date of presentation in the State Legislature	Due date for receipt of Departmental Replies
2014-15	Forest	01	17 March 2016	16 June 2016
2018-19	Public Works	03	21 September 2021	20 December 2021
	Total	**04**		

1.6.4 Response of the Government to recommendations of the Public Accounts Committee (PAC)

Administrative Departments are required to submit Action Taken Notes (ATNs) on the recommendations of the Public Accounts Committee (PAC) within six months from the date of receipt of the recommendations. As of 31 March 2022, 35 ATNs in respect of various Departments (other than Revenue Departments) of the Government of Madhya Pradesh were yet to be received. Details are given in **Appendix 1.1**.

1.6.5 Response of the Government to recommendations of the Committee on Public Sector Undertakings (CoPU)

As of 31 March 2022, a total of 344 IRs and 2,316 paragraphs of the PSUs (other than Revenue Departments) pertaining to previous years were pending settlement, whereas, Explanatory Notes in respect of ten paragraphs of the Audit Reports for the period from 2016-17 to 2018-19 have not been received as per the details given in the **Table 1.4 below**.

Table 1.4 Details of Paragraphs to which Explanatory Notes were not received

Name of the Department	2016-17 (No. of paragraph and Para no.)	2017-18 (No. of paragraph and Para no.)	2018-19 (No. of paragraph and Para no.)
Industrial Policy and Investment Promotion	1 (3.9)	--	1 (4.1)
Public Works	1 (3.1)		--
Energy	--	2 (2.1, 2.3)	2 (4.4, 4.5)
Finance	--	1 (5.1)	--
Forest	--	--	1 (4.2)
Tourism	--	--	1 (4.3)
Total	**02**	**03**	**05**

After issue of Recommendation Reports[5] by the CoPU, the Action Taken Notes in respect of 17 of the Audit Reports (33 ATNs and 157 paragraphs) for the period 1973-74 to 2015-16 pertaining to five departments were not received as of March 2022 as detailed in **Appendix 1.2**.

1.7 Significant audit observations

Compliance audit of the Departments of Government of Madhya Pradesh, brought out instances of non-compliance with applicable rules, codes and manuals, lapses in management of public resources and failure to adhere to norms of propriety.

This Report contains findings of four Compliance Audits pertaining to four Departments of the State Government during 2021-22.

1.7.1 Fund Management and Construction & Upgradation of Major District Roads Through New Development Bank Loan in Madhya Pradesh.

(Public Works Department)

Audit examined the records relating to Construction & Up-Gradation of Major District Roads carried out through the loan assistance from the New Development Bank during the period 2018-19 to 2020-21 in seven Public Works Divisions.

Audit could not derive assurance that the processes to be followed for selection of roads were actually followed. In four Divisions, contrary to the specification, the Dense Bituminous Macadam surface was covered by the next course, Bituminous Concrete after a lapse ranging between one month and 15 months, without laying any other course in between to protect the Dense Bituminous surface. This resulted in below specification work worth ₹ 54.15 crore.

Audit noticed in one Division that an incorrect quantity of materials consumed had been recorded in the Measurement Books and an amount of ₹ 1.49 crore was irregularly paid to the contractor in this regard.

[5] Received between December 2004 to March 2022 in this Office.

1.7.2 Implementation of State Rural Drinking Water Programme in Madhya Pradesh.

(Public Health Engineering Department)

Audit examined the records related to State Rural Drinking Water Programme in 10 Public Health Engineering Divisions out of 55 Divisions of the Department and 18 Schemes out of 58 Schemes being executed by the Jal Nigam Maryadit covering the period from 2018-19 to 2020-21.

The Department had failed to adhere to the Scheme Guidelines. Audit noticed cases of improper estimation which led to additional cost. Audit noticed huge delays in execution of the works/ schemes. Out of 147 works (116 completed and 31 ongoing) in 10 Divisions only eight works were completed in time whereas the median delay in completed works was of 257 days, while in on-going works, it was 851 days. Out of 18 schemes, 12 Schemes were completed with a median delay of 586 days and six ongoing Schemes were delayed by median 756 days from the date of their scheduled completion.

Audit noticed that the contractors have been benefitted through inadmissible payments, non-recovery of liquidated damages, irregular advance payment, irregular release of Performance Security/ Security Deposit, etc. In two schemes, Bank Guarantee of ₹ 14.53 crore was released to the contractors even before completion of the works. In 50 works of four Divisions, Bank Guarantee worth ₹ 2.44 crore was released either before completion of 24 months of operation & maintenance period or before completion of the works.

In five Divisions 1,914 habitations out of 11,248 habitations (March 2019) and under three Divisions 493 habitations out of 10,829 habitations (March 2020) have slipped back from the category of fully covered habitations due to non-ensuring sustainability of water source. The Department had also failed to provide water of adequate quality and quantity due to deficient Monitoring and Operation & Maintenance of the works/ schemes.

1.7.3 Construction and Operation & Maintenance of Power House-II of Shree Singaji Thermal Power Station (SSTPS), Khandwa of Madhya Pradesh Power Generating Company Limited

(Energy Department)

Audit covered the construction and operational performance of the PH-II of the Shree Singaji Thermal Power Station (SSTPS), Khandwa since preparation of feasibility study in the year 2009-10 by consultant till the commissioning 28 March 2019 and plant including operational performance till 31 March 2021.

The Company (MPPGCL)[6] lost the benefit of additional Return on Equity amounting to ₹ 120.75 crore on account of delayed project completion and disallowances of Interest During Construction and Incidental Expenditure During Construction by Madhya Pradesh Electricity Regulatory Commission amounting to ₹ 215.03 crore. Imprudent planning resulted in avoidable payment of ₹ 67.80 crore towards water charges. The Company assumed additional burden of ₹ 102.32 crore as it procured power at costlier rates to mitigate the shortfall during the period of delay.

Major outages in the newly commissioned plant led to generation loss of 9036.55 Million Units and non-recovery of fixed cost of ₹ 1055.54 crore. The SSTPS, Power House-II neither met the operational parameters determined by MPERC resulting in loss of generation, excess

[6] MPPGCL- Madhya Pradesh Power Generating Company Limited.

consumption of fuel and non/ under recovery of fixed cost nor adhered to the various environmental norms of Ministry of Environment, Forest and Climate Change (MoEFCC) regarding stack emission, disposal of ash and water consumption, having adverse impact on the environment.

1.7.4 Diversion of Forest Land and Management of Compensatory afforestation funds in Madhya Pradesh

(Forest Department)

Audit examined the records related to diversion of forest land and the expenditure from Compensatory Afforestation Funds in the office of the PCCF (CAMPA) and 17 Divisions out of 100 Divisions for the period from 2017-18 to 2019-20.

Audit noticed preparation of defective Detailed Project Reports and erroneous selection of site for afforestation. Audit noticed that the procedure for diversion of forest land had not been followed by the Department. In 122 cases {total area of 60.01 Hectare (Ha)} involving less than one Ha of forest land each were approved without obtaining certificates of Gram Sabhas and District Collectors. The Department diverted 2,731 Ha of forest land in favour of Narmada Valley Development Corporation for Sardar Sarovar Project in September 1987. However, 2,809.943 Ha Forest land was indeed submerged under the project. After lapse of several years due to laxity in pursuance, revised sanction of MoEFCC could not be obtained.

Audit also noticed failure of plantations under compensatory afforestation. In five project/plantation sites out of 2,79,790 saplings planted, only 1,02,320 survived. This resulted in infructuous expenditure of ₹ 86.77 lakh. The Department irregularly incurred expenditure of ₹ 53.29 crore on ineligible activities which could not be linked to any of the activities envisaged for compensatory afforestation. Besides this, an expenditure of ₹ 29.58 crore was irregularly incurred on plantation of teak which was a commercial activity not permissible under compensatory afforestation. Further, the Department had failed to recover compensatory afforestation costs amounting to ₹ 4.05 crore from the user agencies.

Audit noticed in 678 land diversion cases of 13 Divisions that self-monitoring reports had not been obtained by the Department from the user agencies. This indicates inefficient monitoring and indifference towards restoration of damages to the ecology and environment on account of diversion of forest land.

1.8 Acknowledgement

The Office of the Accountant General (Audit-II), Madhya Pradesh wishes to acknowledge the co-operation and assistance rendered by the officials of the Public Works Department, Public Health Engineering Department, Energy Department and Forest Department of the State Government during the course of audit of the respective Departments.

CHAPTER – II
PUBLIC WORKS DEPARTMENT

Chapter-II
PUBLIC WORKS DEPARTMENT

Compliance Audit on "Fund Management and Construction & Up-gradation of Major District Roads through New Development Bank Loan in Madhya Pradesh"

Summary

Audit scrutinized the records relating to Construction & Up-Gradation of Major District Roads (MDR) carried out through the loan assistance from the New Development Bank (NDB) during the period 2018-19 to 2020-21. Eighteen Public Works Divisions had received loan assistance, out of which, seven Divisions were selected for detailed scrutiny. In addition, office of the Executive Engineer, Maintenance Division, who is the designated Drawing & Disbursement Officer in this case, and the office of the Engineer-in-Chief were also audited. During the scrutiny of records, Audit noticed the following:

- *Vagueness in the process of road selection.*
- *Department created a financial liability due to delayed payment of contractors' Bills, and Irregular provisioning & execution of backfilling.*
- *Execution of inferior item of Cement Concrete Interlocking Blocks, Execution of below specification work, short deduction of royalty from contractors, and Payment for works not executed.*

These instances of shortcomings, in aggregate, involved an overall impact of ₹ 94.43 crore.

2.1 Introduction

In Madhya Pradesh, the works of construction of Buildings, Roads and Bridges are carried out mainly by the Public Works Department (PWD). The Major District Roads provide connectivity to the District Headquarters with the major towns of a District and also to the headquarters of the other Districts. They connect rural interiors with National Highways and State Highways as well. PWD carries out construction & up-gradation of major district roads in Madhya Pradesh with State budgetary support, assistance provided by the Government of India in the form of grants, and loans obtained from the internal and external financers.

In May 2018, the Government of Madhya Pradesh (GoMP) had approved ₹ 3,250 crore for construction & up-gradation of 87 Major District Roads, consisting of 2,142.98 kms, to be carried out by 18 Divisions[1] with loan assistance from the New Development Bank (NDB)[2]. The NDB accorded approval (October 2018) on a loan of ₹ 2,275 crore (*i.e.*, 70 *per cent* of the project cost). The remaining amount of ₹ 975 crore (*i.e.* 30 *per cent*) was to be borne by the State Government.

According to the Project Agreement signed (October 2018) between the Department and the NDB, the project expenditure was, at first, to be incurred out of the sum allocated by the State

---

[1] Barwani, Bhind, Chhindwara, Dhar, Dindori, Gwalior, Hoshangabad, Jabalpur, Katni, Khandwa, Khargone, Panna, Ratlam, Shivpuri, Shajapur, Ujjain, Umaria and Vidisha.

[2] The New Development Bank is a multilateral development bank established by BRICS countries. It provides loans to the member countries. A loan agreement has been executed between the Department of Economic Affairs, Ministry of Finance, Government of India and the New Development Bank.

Government in its budget and was to be reimbursed by the Bank later in a phased manner, on being claimed through Controller of Aid Accounts and Audit[3]. The loan was to be paid back in 20 years with interest[4] in 30 semi-annual instalments commencing from September 2023 to March 2038.

2.2 Organisational Set up

The Principal Secretary is the administrative head at the state level while the Engineer-in-Chief is the technical head of the Department. The regional offices of the Department are called Zonal Offices. There are Circle Offices under the Zonal Offices. The Circle Offices supervise the work of Divisional Offices. The Engineer-in-Chief is assisted by the Chief Engineers of the Zonal Offices, by the Superintending Engineers of the Circle Offices and by the Executive Engineers of the Division Offices.

2.3 Budget Allocation and Expenditure

During the period from 2018-19 to 2020-21, an amount of ₹ 1,480.86 crore had been allocated for construction of the Major District Roads against which an expenditure of ₹ 1,424.40 crore had been incurred. The details are given in **Table 2.1** below:

Table 2.1: Year-wise Allotment and Expenditure

(₹ in crore)

Year	Budget Proposal	Budget Allotment	Expenditure
2018-19	300.00	208.85	170.55
2019-20	1,000.00	490.00	482.33
2020-21	475.00	782.01	771.52
Total	**1,775.00**	**1480.86**	**1424.40**

***(Source:** Records of Public Works Department)*

2.4 Audit Approach

Audit scrutinized the records relating to construction & up-gradation of Major District Roads carried out through the loan assistance from the NDB during the period 2018-19 to 2020-21 in nine units. Eighteen Divisions had received loan assistance, out of which, seven[5] were selected by applying Stratified Random Sampling method. In addition, office of the Executive Engineer, Maintenance Division, who is the designated Drawing & Disbursement Officer in this case, and the office of the Engineer-in-Chief (E-in-C) were also audited.

Audit findings

Audit findings which are related to deficiencies in contract management and internal control mechanism are given in succeeding paragraphs.

---

[3] Controller of Aid Accounts and Audit, Department of Economic Affairs, Ministry of Finance, Government of India.

[4] The interest shall be payable at the interest rate which shall be a sum of Reference Rate (Six months London Inter Banking Offered Rate in line with the General Conditions) and the Spread, which shall mean 1.10 *per cent per annum*.

[5] Chhindwara, Dindori, Gwalior, Khargone, Ujjain, Umaria and Vidisha.

2.5 Financial Management

2.5.1 Creation of financial liability

As per Clause 14.8 of General Conditions of Contract, if the contractor does not receive payment in accordance with Sub-clause 14.7 of the contract data, the contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during the period of delay. These financing charges shall be calculated at the annual rate of three *per cent* above the discount rate of the central bank.

During the scrutiny of records of seven divisions, Audit observed that as against total value of work done (from January 2020 to June 2021) amounting to ₹ 607.38 crore by contractors, an amount of ₹ 225.60 crore ranging from four *per cent* to 100 *per cent* was withheld from the Running Account Bills, due to paucity of fund from January 2020 to May 2021 as detailed in **Appendix 2.1.**

Further, out of the above ₹ 225.60 crore, an amount of ₹ 205.13 crore was released (June 2021), the contractors have demanded financing charges as per the contractual clause. The financing charge as mentioned above has put an additional load amounting to at least ₹ 3.31 crore (**Appendix 2.1)**. Thus, the Department has incurred the above liability due to delayed payment of contractors' Bills.

In reply, Government stated (July 2022) that due to the shortage of allotment of funds because of COVID 19 pandemic, the liabilities were created. However, delays on the part of contractors were also condoned due to the pandemic and no penalties were imposed on contractors subject to the fact that no contractor would claim financing charges for delayed payments. Hence there was no liability towards financing charges.

The reply is not acceptable as the contractors have already demanded financing charges (May 2021).

2.6 Planning and Estimation

2.6.1 Vagueness in road selection process

According to Para 2.016 of the Works Department Manual, for any new road/ bridge to be constructed or any existing road to be raised in class, the Executive Engineer shall submit the requisite proposals giving information regarding the class or type, the length of the road or bridge and the estimated cost (Stage I) of the works for obtaining the Administrative Approval from the Government. The estimate shall be accompanied by an index plan[6] approved by the Collector and the Commissioner.

Despite repeated requests by Audit, the Department failed to provide records related to selection of roads, proposals submitted by the Executive Engineer, the estimates (Stage I) submitted to the Government and the index plan. As such, Audit could not derive assurance that the processes to be followed for construction of roads were actually followed.

In reply, Government stated (July 2022) that approval of District Collector is required for the new alignment and NDB Project is for the upgradation of existing Major District Roads only.

The reply is not acceptable as the Department upgraded several other district roads to Major District Roads, for which the provision of Works Department Manual Para 2.016 was to be followed which the Department failed to do.

6 The index plan shows proposals of other roads in the neighborhood.

2.6.2 Irregular provisioning and execution of backfilling

Clause 304.1 of the Specifications for Road and Bridges issued by the Ministry of Road Transport & Highways, provides that excavation for structures (inclusive of piped culverts) shall consist of backfilling and clearing up to the site and disposal of all surplus material up to 1000 m. Therefore, the contract unit rate shall be paid in full for the item of excavation including full compensation for these operations.

Audit observed in five[7] Divisions, that the item of backfilling (58,936.47 Cu. M.) was included additionally in the estimates for construction of hume pipe culverts although it was a part of the item of excavation. This resulted in undue financial benefit of ₹ 3.58 crore to the contractors, as detailed in **Appendix 2.2**.

In reply, Government stated (July 2022) that the payment made for backfilling in hume pipe culvert works shall be reconciled in the next bills.

2.7 Execution

Audit observed the following irregularities in execution of road works:

2.7.1 Execution of inferior item of Cement Concrete Interlocking Blocks

Audit observed in Gwalior and Khargone Divisions that the item of Cement Concrete Interlocking Blocks amounting to ₹ 15.38 crore was executed over 1,85,423 sq.m. as provided in the estimates. However, in other Divisions, this item was replaced by Cement Concrete Pavement on the ground of lesser durability of Cement Concrete Interlocking Blocks. Further, the Major District Roads are to be constructed with a designed period of 20 years and the Cement Concrete Interlocking Blocks would not be able to sustain till the end of the designed period. Thus, an amount of ₹ 15.38 crore was expended on execution of inferior work.

In reply, Government stated (July 2022) that being economically cheaper and technically suitable Cement Concrete Interlocking Blocks were executed. Furthermore, no diversion is required for construction of Cement Concrete Interlocking Blocks.

The reply is not acceptable as the Government itself admitted in its reply that Cement Concrete Interlocking Blocks do not provide enough strength to bear the load and that the Cement Concrete Interlocking Blocks had been replaced by Cement Concrete Pavement in other Divisions.

2.7.2 Execution of below specification work

As per Clause 6.5 of IRC:94, the Dense Bituminous Macadam surface can be opened for traffic after being covered by a suitable wearing course and when it has cooled down to the surrounding temperature.

Audit observed in four Divisions[8] that contrary to the above specification, the Dense Bituminous Macadam surface (35,087.02 Cu.M.) was covered by the next course, Bituminous Concrete after a lapse ranging between one month and 15 months, without laying any other course in between to protect the Dense Bituminous surface. Thus, due to delay in execution of Dense Bituminous Macadam, the possibilities of premature damage of road cannot be ruled out. This resulted in below specification work amounting to ₹ 54.15 crore as detailed in **Appendix 2.3.**

---

[7] Chhindwara, Dindori, Gwalior, Khargone and Umaria.

[8] Dindori, Gwalior, Umaria and Vidisha.

In reply, Government stated (July 2022) that the works were delayed due to COVID 19. However, the defects wherever noticed on the Dense Bituminous surface were rectified by the contractors at their cost before execution of the next course.

The reply is unacceptable as the Dense Bituminous Macadam work was to be protected by laying the next wearing course within 48 hours and COVID 19 could not be held as the reason for preventing the laying of next wearing course in view of simultaneous execution.

2.7.3 Short deduction of royalty from contractors

As per Schedule of Rates, 2017 applicable in Public Works Department and provisions of the agreements, the rate of an item to be executed in a work is inclusive of royalty charges. Further, as per Rule 68 (1) of Madhya Pradesh Minor Mineral Rules, 1996 and orders of the Government (February 2003), the final bill of the contractors shall be paid for the work only upon production of No Dues Certificate of royalty issued by the Mining Department, failing which, the royalty will be deducted from the bills and deposited in the Mining Head.

Audit observed in the selected seven Divisions[9] that royalty of ₹ 31.74 crore was to be recovered from the contractors for the minor minerals used in the works, but these Divisions had deducted ₹ 15.22 crore only from their bills. This resulted in short deduction of royalty amounting to ₹ 16.52 crore, as detailed in **Appendix 2.4.**

Further, out of the deducted amount of royalty of ₹ 15.22 crore, ₹ 8.83 crore was kept in Civil Deposit head instead of depositing it in the revenue head concerned. This resulted in violation of Government's order and blockage of Government revenue**.**

In reply, Government stated (July 2022) that the retention money shall be released to the contractors only after submission of Royalty Clearance Certificate as provided in the Agreement and the employer can any time recover the royalty from any amount due if the royalty is not deposited.

The reply is not acceptable as royalty was short recovered from the contractors. Further, Government specifically stated (February 2003) that royalty should be deposited in the Mining Head, instead of Civil Deposit Head, resulting in blockage of Government revenue.

2.7.4 Payment for works not executed

During the scrutiny of records of the Executive Engineer, Gwalior, Audit observed that for construction of a District road[10], 6324.75 sq. m. of Cement Concrete Interlocking Block amounting to ₹ 48.83 lakh[11] was shown as utilised in different reaches of the road and accordingly recorded in the Measurement Book and the contractor was paid (March 2021) on the basis of the measurements recorded. In case of another District Road under the same division (awarded the same contractor), it was observed that 1128.62 Cu. M. of Bituminous Concrete work (in Chainage 0.9 km to 7.74 km of the road[12]) amounting to ₹ 99.66 lakh[13] was recorded as utilised in the Measurement Book and payment was made (June 2021) on the basis of the recorded measurements.

However, during joint physical inspection of the aforesaid roads, none of the two works were found executed. Thus, the Department irregularly recorded the quantity of materials consumed in the Measurement Books and irregularly paid an amount of ₹ 1.49 crore to the contractor for works not executed.

9 Chhindwara, Dindori, Gwalior, Khargone, Ujjain, Umaria and Vidisha.

10 Maharajpur to Shanichara & Old Jail to Shanichara Road, Gwalior Division.

11 6324.75 sq m × ₹ 772 sq m.

12 Nayagaon Moch Richor Banwaar Puravanvaar Tekpur Chinor Road, Gwalior Division.

13 1128.62 Cu. M. × ₹ 8,831 per Cu. M.

In reply, Government stated (July 2022) that the work of Cement Concrete Interlocking Blocks had suffered due to COVID 19. The work has now been done completely.

The reply is silent about incorrect entries of items in Measurement Books resulting in excess payment. Further, no action has been initiated against the concerned officials for wrongful measurement and payments.

2.8 Internal Audit

According to the order issued (April 2011) by the State Government, the Superintending Engineer and the Chief Engineer shall respectively carry out inspections of the works involving expenditure of ₹ three crore or more, at least once in one month and two months.

Audit observed in all the seven Divisions that there was shortfall of 93 inspections by the Superintending Engineers concerned and 187 inspections by the Chief Engineer.

As per Para 7.2.6 of Indian Roads Congress 58: 2015, dowel bars are to be provided at the contraction joints.

Audit observed between Chainage 3700 and 3900, and Chainage 13000 and 13190 of Udaypura-Bamora-Pathani Road under Vidisha Division, the item of Pavement Quality Concrete (M-40) was executed with thickness of 250 mm without dowel bars which was required under the specifications. Consequently, cracks had occurred on the road surface resulting in execution of sub-standard work.

In reply, Government stated (July 2022) that the all the NDB funded Projects are supervised by appointed State Quality Control Consultants, and by the Chief Engineer and the Superintending Engineers also.

The reply supports audit contention that despite the provision in place for periodic inspections, the concerned officials failed to discharge their duties resulting in execution of below par quality work.

2.9 Conclusion

The Audit of Fund Management and Construction & Up-gradation of Major District Roads through New Development Bank Loan in Madhya Pradesh revealed the following issues:

- Provisions for timely payment to the contractor were not strictly followed resulting in extra financial liabilities to the State Ex-chequer.
- Selection of roads was not made in a proper manner.
- Compliance of Road Specifications and Manual were not adhered to during the entire execution process.
- Monitoring of construction of roads was not done as per norms and there were incorrect entries in Measurement Books.

2.10 Recommendations

- The Department should ensure a strict mechanism for the timely payment to the contractors to avoid contractual obligations of financing charges to be paid to the contractors.
- The Department should develop a real time process for the selection of roads to ensure maximum benefits to the people.

- The Department should strictly adhere to follow the compliance of Road Specifications and Manual during the entire execution process and should monitor the construction works as per prescribed norms.
- The Department should fix responsibility and initiate departmental enquiry against the erring officers for short recovery of royalty from the contractors.

CHAPTER – III
PUBLIC HEALTH ENGINEERING DEPARTMENT

Chapter-III
PUBLIC HEALTH ENGINEERING DEPARTMENT

Compliance Audit on "Implementation of State Rural Drinking Water Programme in Madhya Pradesh"

Summary

Audit covered the period from 2018-19 to 2020-21 and scrutinized the records in detail in 10 Public Health Engineering Divisions out of 55 Divisions of the Public Health Engineering Department and 18 Schemes out of 58 Schemes being executed by Jal Nigam Maryadit. The records of the Engineer-in-Chief, Public Health Engineering Department were also examined. During the scrutiny of records, Audit noticed the following:

- *Non-adherence to scheme guidelines and infructuous expenditure on preparation of Detailed Project Reports, Poor workmanship by the Consultants, Non-ensuring sustainability of water source, Slip back of fully covered habitations to partially covered habitations, Improper estimation led to additional cost, Non-coverage of all households of villages.*
- *Funds were lying idle with the Nigam at the end of the years 2018-19 and 2020-21, diversion of funds of Jal Jeevan Mission funds.*
- *Non-coverage of all households of villages, Irregular payment of Excise Duty to the contractors, Non-deduction of Liquidated Damages, Adoption of incorrect rate for over-head tanks, Irregular advance payment to the contractors, Failure to obtain additional Bank Guarantee from the contractors, Irregular release of Bank Guarantee to the contractors, Irregular release of Performance Security and Security Deposit to the contractors.*
- *Irregularities in Monitoring & Quality Control of Schemes, Deficiencies in Operation & Maintenance.*

These instances of shortcomings, in aggregate, involved an overall impact of ₹ 283.42 crore.

3.1 Introduction

The Public Health Engineering Department (Department) of the Government of Madhya Pradesh (State Government) is the principal agency for monitoring and managing various water resources for extending safe drinking water facilities to the rural population[1] of the State. To provide adequate safe water for drinking and other domestic needs to every rural citizen of the State, the Department implements the State Rural Drinking Water Programme (Programme). The Programme includes drilling of tube wells, installation of hand pumps and motor pumps, and implementation of Rural Piped Water Supply Scheme by providing water through tap connection to every household.

In July 2012, the State Government incorporated the Madhya Pradesh Jal Nigam Maryadit (Nigam) under the administrative control of the Public Health Engineering Department. The Nigam was envisaged as an implementing agency to execute the Multi-Village Rural Water

[1] In urban areas water supply is to be ensured by the local bodies, e.g. Municipal Corporations.

Supply Schemes (Scheme) whereas Single Village Schemes were to be executed by the department on behalf of the State Government.

The Public Health Engineering Department is headed by an Additional Chief Secretary at the Government level. The Engineer-in-Chief (E-in-C) is the head of the Department followed by Chief Engineers, Superintending Engineers and Executive Engineers. The Nigam is headed by a Managing Director who is assisted by a Project Director and General Managers.

3.2 Budget Allotment and Expenditure

Budget Allotment and Expenditure of the Programme during the period, 2018-19 to 2020-21 are detailed in **Table 3.1** below:

Table 3.1: Budget Allotment and Expenditure

(₹ in crore)

Years	Implementing Agency	Allotment	Expenditure
2018-19	Department	536.27	446.95
	Nigam	1,274.70	1,048.30
2019-20	Department	438.57	396.35
	Nigam	1,463.00	1,441.29
2020-21	Department	352.48	344.70
	Nigam	1,858.15	1,825.05
Total	**Department**	**1,327.32**	**1,188.00**
	Nigam	**4,595.85**	**4,314.64**

*(**Source:** Information furnished by Public Health Engineering Department)*

3.3 Objective and Scope of Audit

This Audit was conducted between June and October 2021 covering the period from 2018-19 to 2020-21 to ascertain whether the Project planning was adequate, fund allocation was sufficient, relevant codal and contractual provisions were followed in construction, repair and maintenance of work; required quantity and quality of water was supplied to the targeted beneficiaries and effective quality control and monitoring was in existence during 2018-19 to 2020-21.

Audit examined the records in 10 Divisions[2] out of 55 Divisions of the Department and 18 Schemes[3] (as detailed in **Appendix 3.1** and **Appendix 3.2**) out of 58 Schemes being executed by Nigam. The records of the Engineer-in-Chief were also examined at the headquarters.

Audit Findings

Audit findings related to deficiencies in planning and estimations and issues related to tendering, execution, quality control and monitoring are briefly discussed in the succeeding paragraphs.

[2] Barwani, Betul, Bhopal, Damoh, Mandla, Morena, Rajgarh, Raisen, Ratlam and Satna.

[3] Out of the total 58 Schemes, 19 Schemes were completed and 39 were under progress. Out of 19 completed Schemes, 12 Schemes which were completed during the Audit period (2018-19 to 2020-21) and out of 30 ongoing Schemes whose financial progress as on 31 March 2021 was more than 60 *per cent* of the cost, six Schemes were selected for detailed scrutiny. Financial progress of the remaining nine ongoing Schemes was less than 60 *per cent* of the cost, hence were not selected.

3.4 Scheme planning and preparation of Detailed Project Reports

3.4.1 Non-adherence to scheme guidelines and infructuous expenditure on preparation of Detailed Project Reports by the Department

The Department issued (between May and July 2017) guidelines for the implementation of *Mukhyamantri Gram Naljal Yojana*, a Piped Water Supply Scheme under the Programme in the State. As per the guidelines, the Executive Engineer has to identify eight villages having population of more than 1,000 from each Block and forward the details of these villages to the Superintending Engineer for marking under the scheme. Thereafter, the Superintending Engineer has to forward the proposal to the Chief Engineer, who will analyse the same and issue the list of villages marked for Piped Water Supply Scheme. Further, the Executive Engineer has also to ensure availability of water sources having adequate quantity of drinkable water in all the marked villages and send the proposal to the Superintending Engineer, who will examine the proposal as to eligibility of the villages in respect of the norms[4] for supply of water and send the same to the Chief Engineer for approval. The Chief Engineer will examine the proposal and issue the list of eligible villages.

Out of the 'eligible' villages, four such villages from each Block are to be selected where implementation of the scheme was possible as per the Detailed Project Report. Finally, the Chief Engineer will issue the list of 'selected' villages.

Audit observed that:

- The Executive Engineers of all the 10 selected Divisions had sent lists of 491 villages to their Superintending Engineers but the prescribed norms were not followed while determining the numbers of villages for inclusion in the lists. In six Divisions, the numbers of villages were more than eight per Block, whereas in two Divisions, the numbers of villages were less than eight per Block as detailed in **Appendix 3.3**. However, it was observed that no list of 'marked', 'eligible' and 'selected' villages was issued by the Chief Engineer. Hence, the villages were selected by the Department without following the requisite stages[5] and all the 491 villages were selected for implementation of the scheme by the Divisions in the absence of the said communication from the Chief Engineer.
- Further, Para 3(ix)(d) of the above cited circular (July 2017) stipulates that after the process of marking villages, the process of ascertaining the sufficiency and quality of water will be taken up. As soon as the first four eligible villages are identified their names will be included in the list of eligible villages for execution of the programme.

Out of 491 selected villages in the 10 selected Divisions as mentioned in **Appendix 3.3**, Detailed Project Reports were prepared only for 373 villages, of which 273 Detailed Project Reports were approved and administrative approval was given accordingly. However, the scheme was actually started in 266 villages. The reasons for not taking up the scheme in the remaining 107 villages, despite incurring an expenditure of ₹ 4.96 crore (as detailed in **Appendix 3.4)** for assessment of the water source and preparation of Detailed Project Reports for these villages, were not available in the records of the Divisions.

---

4 Supply of quality water at the rate of 70 litres per capita per day, minimum seven metre pressure of water at the dead end of the villages.

5 1st stage: Marking of villages as per population; 2nd stage: Assessment of adequate drinking quality water in the existing bores or taking drill for new bore; 3rd stage: Preparation of Detailed Project Report for the villages where adequate quality water is available in bore as per supply norms; 4th and the last stage: Execution of approved works against the submitted Detailed Project Reports.

The Government stated (August 2022) that the schemes for the said 107 villages were to be implemented under Jal Jeevan Mission[6] (JJM) hence they were excluded from the Mukhyamantri Gram Naljal Yojana. These DPRs have been modified as per the JJM guidelines for implementation of the schemes.

The reply is not acceptable because records regarding selection of these villages under JJM were not shown to Audit. Consequently, audit cannot derive assurance that these villages have actually been included into Jal Jeevan Mission or not and whether additional expenditure towards preparation of the DPRs has been incurred.

3.4.2 Infructuous expenditure on preparation of Detailed Project Reports by Nigam due to absence of Identification Report

As per Paragraph 3.2 of the Manual on Water Supply and Treatment issued (May 1999) by Central Public Health and Environment Engineering Organisation, Government of India, an Identification Report is required to be prepared for a potential Scheme prior to the preparation of Detailed Project Report. An Identification Report is a "desk study", to be carried out relying primarily on the existing information. It also provides an idea of the magnitude of the cost estimates of a Scheme to facilitate bringing the Scheme in planning and budgetary cycle for obtaining sanction to incur expenditure for carrying out the next stages of Scheme preparation.

Audit observed (March 2021) that Nigam had entrusted the work of preparation of Detailed Project Report during May 2013 to October 2020 for 144 Schemes to the Detailed Project Report Consultants. However, the Identification Reports of the potential Schemes for their selection were not available on the records. Out of the selected 144 Schemes, only 64 Schemes were taken up by the Nigam of which two Schemes could not start due to the absence of water sources. The remaining 80 Schemes having estimated Project Cost of ₹ 40,817.38 crore could not be taken up by the Nigam even after lapse of one to eight years from the dates of preparation of their Detailed Project Reports after incurring ₹ 27.19 crore for its preparation, mainly due to not prioritizing the same by the State Government. Consequently, the villages to be covered under those Schemes were also deprived of safe and adequate drinking water.

In reply, the Government stated (August 2022) that 48 Schemes out of the remaining 80 Schemes have been approved for execution by the State Level Scheme Sanctioning Committee. And, NIT for 26 Schemes out of these 48 Schemes have already been issued in January 2022.

The reply is not acceptable as Nigam has not furnished such identification reports to the Audit. Further, there is huge delay ranging up to eight years in approval of the 48 Schemes after preparation of DPRs and remaining 32 Schemes are still pending for approval, which resulted into blocking up of the expenditure of ₹ 27.19 crore incurred on preparation of these 80 DPRs.

6 Jal Jeevan Mission is envisioned by Department of Drinking Water & Sanitation, GoI to provide safe and adequate drinking water through individual household tap connections to all households in rural India.

3.4.3 Preparation of defective Detailed Project Reports

As per Clause 3.8 of the Agreement for preparation of Detailed Project Reports, the Nigam was required to take action against the Detailed Project Report Consultant in case of poor workmanship in the preparation of Detailed Project Reports. As per Clause 9.4[7] of the Manual, provision for a dedicated 33 kV feeder was to be made in the Detailed Project Report.

Audit observed (October 2021) that in the Detailed Project Report of Udgawan Scheme (May 2013) the consultant did not provision for suitable electric line. After completion of the Scheme, the power supply for operation of Intermediate Pumping Stations was taken from 11 kV Low Tension line.

Later, the Nigam decided (December 2019) to install a dedicated 33 kV line from Datia sub-station for Dangkarera and Palothar Intermediate Pumping Stations at an additional cost of ₹ 2.30 crore, which was however not implemented. The Nigam also did not take any penal action against the consultant in this regard. Audit observed that due to deficient supply of electricity, water supply to 25 out of total 71 villages (35 *per cent)* was affected and could be made only on alternate day basis.

In reply, the Government stated (August 2022) that the supply was considered to be taken from 11 kV line to make the scheme cost effective as the sub-station was at a distant location and alternatively, supply to Dangkarera and Palothar Intermediate Pumping Stations were shifted to agricultural feeder which regularized the power supply.

The reply is not acceptable as Nigam failed to effectively monitor the performance of the consultant(s) and take sou-moto action for preparation of defective DPRs.

3.4.4 Sustainability of water source

3.4.4.1 Non-ensuring sustainability of water source by Nigam

As per Para 9.1 read with Para 3(b) of Manual for preparation for Detailed Project Report for Rural Piped Water Supply Schemes, it shall be ensured that selected water sources shall be capable of meeting 100 *per cent* water requirement of the system for the entire design period of 30 years. Para 9.1 ibid further stipulates that sources selected shall be capable of meeting water requirement of the system for the design period. Source dependability shall not be less than 100 *per cent*. If the selected source is non-perennial, then desired impounding reservoir shall be created with necessary structural protection works to meet the lean period demands.

The Nigam identifies the source of raw water from river, dam, reservoir, pond, etc. at the time of planning a Scheme, for which water allocation for the quantity of water required for 30 years is provided by the Madhya Pradesh Water Resources Department. Water Supply Agreement for the supply of allocated quantity of water is also executed between the Nigam and Madhya Pradesh Water Resources Department.

Audit noticed (October 2021) in eight schemes that sustainability of water sources was not ensured by the Nigam throughout the year, as it was observed that for 72 days to 171 days, no water was available in the respective water source and for 111 days to 297 days the available water was less than the immediate requirement of the Schemes, as detailed in **Appendix 3.5**. Hence, in the above eight Schemes, identified water source was not completely dependable, as it was not perennial in all seasons.

[7] As per Clause 9.4 of the Manual, suitable provision was to be made in Detailed Project Report for dedicated 33 kV feeder for Raw Water Pumps from nearby 132/33 kV sub-station to ensure the supply of timely and adequate drinking water in the villages covered under the Scheme.

Out of the eight schemes in respect of 82 villages under four Schemes[8], water was supplied below the required pressure of seven metres and daily water supply was not ensured *(referred to in **para 3.7.1** below)*. Therefore, site selection of water sources was inappropriate and design was faulty as the department could not ensure availability of water through construction of impounding reservoirs for storage of water.

In reply, the Government stated (August 2022) that the water allocation by the Madhya Pradesh Water Resource Department has been done as per requirement of Multi Village Water Supply Schemes and thus the question of uncertainty of water availability does not arise.

The reply is factually incorrect as the Manual stipulates that the Department was to ensure sustainability of water source through all possible measures.

3.4.4.2 Non-provisioning of Security and Sustainability of Water Source by PHE Divisions

The Department had issued instructions (July 2017) that provision for ensuring security and sustainability of water source shall be made compulsorily in all the Detailed Project Reports and executed accordingly.

Audit observed that provisioning of sustainability was included in the Detail Project Reports of 147 piped water supply works of 10 Divisions, but was incorporated in 10 Agreements (four in Bhopal and six in Raisen). Furthermore, out of these 10 Agreements, it was executed under one Agreement only. Reasons for not including this provision in the remaining 137 agreements were not available in the records.

In reply, the Government stated (August 2022) that necessary structures for water augmentation of ground water sources are being constructed by the Panchayat & Rural Development Department under 15th Finance Commission and MNREGA.

The reply is not acceptable because provisions of water harvesting was already made in the above DPRs. Hence, this must have been included in the Agreements and executed accordingly. Further, the fact that in violation of the agreement, the executing agency implemented the sustainability measures for the source in only one out of 10 agreements indicated poor monitoring and weak control.

3.4.4.3 Slip back of fully covered habitations to partially covered habitations

The main aim of the drinking water schemes is to ensure that the habitations covered thereunder do not slip back[9] from the category of covered habitations to uncovered or partially covered habitations due to depletion of the ground water level.

Audit observed that under five Divisions[10] 1,914 habitations out of 11,248 habitations (March 2019) and under three Divisions[11] 493 habitations out of 10,829 habitations (March 2020) have slipped back from the category of fully covered habitations as detailed in **Table 3.2**.

---

8 Dhuti, Piparjhari, Devsarra and Bhatera.

9 Habitations shifted from category of fully covered to partially covered due to drying up of sources or contamination of water, etc. (CAG Report no. 15 of 2018 on National Rural Drinking Water Programme).

10 Rajgarh, Raisen, Mandla, Ratlam and Morena.

11 Damoh, Satna and Barwani.

Table 3.2: Status of slip back of fully covered habitations to partially covered habitations

(in number)

Sl. No.	Name of Districts	Fully covered habitations at the end of March 2019/ March 2020		Fully covered habitations in March 2021	Slip back habitations	Percentage of slip back
1	Rajgarh	2,079	(03/2019)	1,417	662	31.84
2	Raisen	1,629		1,505	124	7.61
3	Mandla	2,909		2,226	683	23.47
4	Ratlam	1,306		1,294	12	0.91
5	Morena	3,325		2,892	433	13.02
6	Damoh	1,278	(03/2020)	1,247	31	2.42
7	Satna	4,324		3,945	379	8.76
8	Barwani	5,227		5,144	83	1.58
				Total	**2407**	

***(Source:** Records of Public Health Engineering Department)*

From the above table, it can be seen that 2,407 habitations slipped back from fully covered habitations to partially covered habitations. The reason behind the slipping back of the habitations was the depleting ground water level.

Further, in most of the habitations, drinking water is provided through hand pumps and tube wells. As of March 2022, the Department had made 1,06,665 drillings for handpumps and tube wells during the different time span in the above Districts. The Department had, however, not maintained the details, viz. dates of drilling, water levels, etc. for these handpumps and tube wells, and did not make any effort for enhancing / stabilising the ground water level. Therefore, the Department failed to keep watch over the depleting water level.

The Government accepted (August 2022) that the habitations slipped back from fully covered to partially covered due to the reasons of expansion of rural habitations and utilisation of ground water for other purposes such as irrigation. The necessary works for water augmentation are being done by the Panchayat & Rural Development Department.

A report on the progress of augmentation measures is awaited (January 2023).

3.4.5 Improper estimation led to additional cost

In Manpur Multi Village Scheme in Umaria, Engineering, Procurement and Construction work was awarded (August 2014) to a contractor at a cost of ₹ 49.08 crore.

Audit observed that although the number of household connections (9,820) remained unchanged, there was huge increase in the quantity of two components: Clear Water Pumping Main (272 *per cent*) and Water Distribution Network (112 *per cent*) during execution of the work as detailed in **Appendix 3.6**. This resulted in an excess expenditure of ₹ 8.09 crore.

In reply, the Government stated (August 2022) that the total 9,820 Nos. of household were calculated as per projected population of the year 2025. Further, the huge variations of Clear Water Pumping Main and Water Distribution Network occurred due to inclusion of the habitations/ *majras*/ *tollas* located far away to fulfill the demand of villagers.

The reply is factually incorrect as total number of household (9,820 Nos.) under the schemes was already taken as per the projected population of the year 2025 of those villages covered in this scheme. Therefore, the issue of additional increase in the distribution network did not arise, as stated by the Government.

3.4.6 Non-coverage of all households of villages

As per the minutes of review meeting dated 28.12.2012 chaired by Secretary, PHED, it was decided to adopt the provisions of Manual of Preparation of DPR 2012 and population of villages to be collected from the revenue offices to calculate the total water demand as per the norms. Further, as per Para 4.1 and 4.2 of the Manual, the estimation of design population was to be done considering the census data for past decade with population projection with due regard to future growth and this design population should then be used to calculate water demand for the proposed water supply scheme.

Audit observed that the following households of the selected villages under four Schemes were not included (August 2014 to April 2017) in the Schemes by the Nigam, as detailed in **Table 3.3** below:

Table 3.3: Details of households not covered under the Schemes

S. No	Name of the Schemes	No. of villages	Total cost of the scheme (₹ in cr.)	No. of households excluded
1	Udgawan Scheme, District- Datia	19	90.35	468
2	Byarma Scheme, District -Damoh	17	36.70	589
3	Narhela Scheme, District – Morena	03[12]	77.66	724
4	Bankpura Scheme, District-Rajgarh	05[13]	122.86	526
		Total	**327.57**	**2,307**

***(Source:** Information furnished by the Nigam)*

In spite of expenditure of ₹ 327.57 crore made on the execution of four Schemes, 2,307 households out of the total 70,010 households were not included. Consequently, the benefit of the Schemes could not reach the intended beneficiaries covered under the Scheme. Further, additional expenditure will have to be made for covering the left-out villages.

In reply the Government stated (August 2022) that to make the project economic and viable, the habitations under villages with ample sources of water were not added under Piped Water Supply Scheme.

The reply is not acceptable as no reasons (with proper records) for exclusion of households were made available to Audit in support of Department's claim that left out villages had ample source of water.

3.5 Utilisation of fund

3.5.1 Improper utilisation of funds by Nigam

As per Rule 284 of Madhya Pradesh Treasury Code (Volume-I), no money shall be drawn from the treasury unless it is required for the immediate disbursement.

Audit observed that:

- During 2018-19 to 2020-21, the Nigam had not utilised the entire amount of Funds received by it. At the end of the years 2018-19 and 2020-21, ₹ 273.75 crore and ₹ 1,012.70 crore respectively were lying idle with the Nigam as detailed in **Appendix 3.7**.

  Nigam replied (October 2021) that amount has been withdrawn based on anticipation of the bills which could not be disbursed and shown as unutilised.

[12] Dharod, Kunwarpura and Dhoren.

[13] Kalakot, Bankpura, Jagnyapura, Palave and Chanderi.

The reply is not acceptable as withdrawal of amount of ₹ 1012.70 crore out of total expenditure of ₹ 1825.04 crore in anticipation of bills was not only irregular but also imprudent fiscal planning.

- The Nigam awarded the works for execution of Bankpura and Satna-Bansagar Schemes in April 2017 and July 2018 respectively under funding from the National Bank for Agriculture & Rural Development and New Development Bank, respectively to the contractors. The works of both the Schemes were still ongoing. Further, Jal Jeevan Mission was introduced (December 2019) by Government of India, in which there was provision of 50 p*er cent* funding by Government of India for in-village water supply infrastructure for augmentation of the existing distribution network. The in-village supply infrastructure means distribution network of pipelines to provide the household connections in case of the requirement in augmentation of the existing distribution network in any scheme wherein additional distribution network was additionally required due to expansion of population, inclusion of additional *tola*/*majra* etc. However, it was not envisaged to take up those works which were already been required to be done under the scope of scheme and duly funded by another agencies NABARD and NDB.

  Further, under the Bankpura[14] and Satna-Bansagar[15] Schemes, the Nigam paid to the contractors ₹ 1.12 crore and ₹ 43.73 crore, respectively from the Jal Jeevan Mission Fund for the various works, which were already required to be done under the existing scope of these Schemes and duly funded by NABARD and NDB. This led to diversion of ₹ 44.85 crore of Jal Jeevan Mission funds towards non-eligible works of these schemes.

  In reply, the Government stated (August 2022) that Jal Jeevan Mission Fund was used for in-village infrastructure of both the Schemes on the basis of approval accorded by the State Level Scheme Sanctioning Committee.

  The reply is not acceptable because Nigam failed to provide the reasons for utilising Jal Jeevan Mission funds for those in-village infrastructure which was already required to be executed in the existing scope of scheme funded by the NABARD and New Development Bank.

3.6 Award and Execution of work

3.6.1 Non-coverage of all households of villages

As per the strategic plan of the Department, 100 *per cent* connections were to be provided to the household under the piped water supply scheme.

Audit observed in 77 works out of 116 completed piped water supply works in nine Divisions, that out of 35,695 households tap water connection had been provided to 26,887 households only. In none of these Divisions, 100 *per cent* piped water connection was achieved. The shortfall in providing tap connections ranged between 13 *per cent* to 35 *per cent* as detailed in **Appendix 3.8**. Thus, the habitants were deprived of safe and potable drinking water.

In reply, the Government stated (August 2022) that in drinking water schemes, provision for the number of domestic tap water connections on the basis of the number of families residing in the respective villages was made according to the data of Samagra Samajik Suraksha Mission and accordingly the above component was included in the contracts. For more than

[14] Construction of 55 Elevated Surface Reservoirs under the Scheme, these were in the scope of Scheme.
[15] For construction of in-village infrastructures, which were already included in the original scope of work of the contractor.

one family residing in a household, only one or more domestic tap connections were given as per the demand of the head of the households. The households which had private tap connections in their homes were not given tap connections. Due to the reasons mentioned above lesser number of tap connections were given than contracted. The other reasons, apart from this are being investigated.

The reply is not acceptable as the fact remains that lesser number of domestic connections were provided *(vis-à-vis)* the number of households. Further, reply of the Government that provision for number of domestic tap water connection on the basis of the number of families residing in the respective villages was made according to the data of Samagra Samajik Suraksha Mission is not correct as Detailed Project Reports were prepared for the projected population in 2018 based on the 2011 census after factoring the population growth rate based on the population growth of the previous decade i.e. 2001-10.

3.6.2 Irregular payment of Excise Duty to the contractors by Nigam

The Government of India, Ministry of Finance (Department of Revenue) vide Gazette Notification No. 12/2012-Central Excise dated 17.03.2012, exempted the payment of Excise Duty in public interest on all the items[16] required in setting up of water supply plant on the basis of certificate issued by the competent authority[17].

Audit observed that the Nigam had invited 17 tenders on turnkey basis during 2013-14 to 2015-16 i.e., before implementation (01.07.2017) of the Goods and Service Tax Act. Clause 7.3 (Taxes) of Part-III of the Tender Document issued by Nigam specified that all the charges, taxes or duties including the Excise Duty shall be payable by the contractor. However, Nigam will help the contractors to get exemption certificates from the competent authority. The rate quoted by the contractors should include all taxes and duties. The contractors had quoted their rates including the Excise Duty payable at the rate of 12.50 *per cent* on the 60 *per cent* cost (material cost) of the tender.

Audit further observed that though all the materials required for the setting up of Water Supply Plant were exempted from Excise Duty, the contractors had been paid at their quoted rates (which were inclusive of Excise Duty) even when they had been issued certificates with respect to duty exemption. Thus, contractors were provided undue financial benefit of ₹ 72.90 crore as detailed in **Appendix 3.9**.

In reply, the Government stated (August 2022) that before applicability of the GST rates for the works were invited inclusive of all taxes (inclusive of Excise Duty) to be payable by the contractors and an Excise Exemption Certificate was issued (as per Clause 7.3 of Part III of the Tender Document) to the contractors by Nigam for the quantities of items actually used in the work. Nigam has acted in accordance with the provision stated above.

The reply itself corroborated audit contention that on one hand, contract rates were inclusive of all taxes including excise duty and payments to the contractors were also made inclusive of the excise duty, and on other hand, excise duty exemption certificate were also granted to the contractor resulting into undue financial benefit to the contractors.

3.6.3 Non-deduction of Liquidated Damages

3.6.3.1 As per Clause 13 of the "Conditions of Contract" of the executed Agreements for implementation of Schemes, the whole work was to be completed in all respect within 18 to 24 months from the date of issue of the order for commencement of work. If the whole

[16] Machinery, including pipes, instruments, apparatus and appliances, auxiliary equipment and their components/parts.

[17] Collector/ Deputy Collector/ District Magistrate of the District in which the Scheme is carried out.

work is not completed to the satisfaction of the Engineer-in-Charge within the said period, the contractor was liable for payment of Liquidated Damages for each default at specified rates[18], subject to maximum of 10 *per cent* of Contract Value.

Audit observed that:

- Twelve Schemes were completed with a median delay of 586 days and six ongoing Schemes have a median delay of 756 days from the date of their scheduled completion.
- Out of the above, in seven completed and one ongoing Schemes, the contractors delayed the Schemes by 532 median days, but liquidated damages of ₹ 36.90 crore were not deducted by the Nigam despite the delay being attributable to the contractors, as detailed in **Appendix 3.10**.

In reply, the Government stated (August 2022) that liquidated damages would be recovered from the contractors of seven[19] Schemes. In the remaining Schemes, the delays in work were caused by hindrances for which the contractors were not responsible.

A report on recovery is awaited (January 2023).

3.6.3.2 As per Clause 15 of Part-I of General Conditions of Contract, the time allowed for carrying out the work shall be strictly observed by the contractor. Failure of the contractor to adhere to the timeliness shall attract liquidated damages at the rate of 0.05 *per cent* per day of delay limited to a maximum of 10 *per cent* of the contract price.

Audit observed that out of 147 works (116 completed and 31 ongoing) in 10 Divisions only eight works[20] were completed in time whereas the median[21] delay in completed works was of 257 days, while in on-going works, it was 851 days, as shown in **Appendix 3.11**.

The time extension was sanctioned by the Superintending Engineer in 18 works only. In the remaining 121 works neither time extension was granted nor was any penalty imposed on the contractors for delay in execution of works. In eight, out of 18 works of Satna Division where time extension was granted, the Superintending Engineer sanctioned time extension without analysing the reason for delay and stated that penalty should be calculated and imposed before making final payment to the contractor. In 10 delayed works[22], the Superintending Engineer in nine works and the Executive Engineer in one work sanctioned time extension with penalty at 0.05 *per cent* to 2.50 *per cent* of the contract amount for the total delay of 15 to 323 days attributable to the contractor ignoring the provisions of the agreement at the rate of 0.05 *per cent* per day of delay limited to a maximum of 10 *per cent* of the contract price.

Therefore, in 129 works[23] penalty of ₹ 13.41 crore for delay was not levied while in 10 works penalty of ₹ 39.86 lakh was short levied.

18 Contract Value between ₹ 25 crore and ₹ 50 crore: ₹ 1.00 lakh per day, Contract Value between ₹ 50 crore and ₹ 100 crore: ₹ 1.50 lakh per day, and Contract Value above ₹ 100 crore: ₹ 3.00 lakh per day.

19 Udgawan, Majholi, Niwari, Manpur, Narhela, Bankpura and Niwari-Prithvipur.

20 In three works total delay was of six to seven days which is treated as timely completion of work, 1: In Rajgarh, Village Limboda and Kharpa (Delay six and seven days) 2: Betul, Village Sehra (Delay six days).

21 The median is the middle number in a sorted, ascending or descending list of numbers and can be more descriptive of that data set than its average.

22 Damoh: Five works, Raisen: Four works and Betul: One work.

23 123 works (neither time extension nor imposition of penalty) + six works (no penalty imposed even after granting time extension) = 129 works.

In reply, the Government stated (August 2022) that penalty on the contractor would be imposed after analysis for delay in work. After completion of work, analysis for delay can be done by the Department and accordingly penalty would be imposed as per agreement conditions. The concerning Divisions have been instructed to impose and recover the penalty.

A report on recovery is awaited (January 2023).

3.6.4 Adoption of incorrect rate for over-head tank by PHE Divisions

As the rates for construction of overhead tanks were not in the Unified Schedule of Rate applicable in the Department, the same were decided in the 12th meeting (January 2018) of the Technical Committee of the Department as shown in **Table 3.4** below:

Table 3.4: Rates for over-head tanks determined by the Technical Committee

Capacity of over-head tank (In Kilo Liter)	Rate of over-head tank with 12 meter staging (₹/ Litre)	Rate of over-head tank with 15 meter staging (₹/ Litre)
75	15.30	The rate of Overhead Tank for 15-Meter-high staging shall be calculated by multiplying the rate mentioned in column 2 by 1.05 (five *per cent* more).
100	12.15	
125	10.80	
150	10.10	

*(**Source:** Information furnished by Public Health Engineering Department)*

Audit observed in 18 piped water supply works in four Divisions (Rajgarh, Raisen, Betul and Mandla) that instead of considering the rate determined by the Technical Committee, higher rates were adopted in the bill of quantity for construction of over-head tanks. This resulted in extra cost of ₹ 78.51 lakh as detailed in **Appendix 3.12**.

In reply, the Government stated (August 2022) that the matter is being examined.

3.6.5 Irregular advance payment by PHE Divisions

Clause-X of Annexure-E of the Agreement executed with the contractor stipulated that after completion of all the works and trial run/commissioning of piped water supply scheme, contractor shall operate and maintain the whole scheme for a period of 24 months including defect liability period[24]. Operation & maintenance period shall start only after 30 days of successful trial run for two years and shall be paid[25]according to quarter wise period of operation & maintenance.

Audit noted in 19 piped water supply schemes in three Divisions (Damoh, Satna and Morena) that payment of ₹ 43.21 lakh for operation & maintenance period were made to the contractors even before completion of successful trial run of the schemes. In two works[26] of Morena District, it was noted that the amount for operation & maintenance was paid to the contractor even before completion of the schemes. This has resulted in irregular advance payment of ₹ 43.21 lakh to contractor for operation & maintenance as detailed in **Appendix 3.13**.

In reply, the Government stated (August 2022) that the matter is being examined.

24 Defect liability period is trial run +12 months, and the trial run will be of 30 days.
25 Payable equally in each of eight quarters.
26 Village Baretha and Johan of Morena Division.

3.6.6 Failure to obtain additional Bank Guarantee by Nigam

As per the circular[27] issued (2 May 2016) by Madhya Pradesh Public Works Department, if the rates quoted by the contractor are found lower than 15 *per cent* of the Schedule of Rates, an additional Bank Guarantee equal to the difference of Schedule of Rates and the lowest rates must be deposited by the contractor to ensure the successful completion of the work.

Audit observed that:

- In Satna-Bansagar Scheme in district Satna, the price quoted by the contractor, was 20.64 *per cent* below the estimated cost of ₹ 1,431.41 crore. Before execution of the Agreement the Nigam should have obtained additional Bank Guarantee of ₹ 80.74 crore[28] from the contractor but the same was not done.
- In Basai Scheme in districts Datia and Shivpuri, the price quoted by the contractor was 21.42 *per cent* below the estimated cost of ₹ 62.92 crore. Before execution of the Agreement the Nigam should have obtained additional Bank Guarantee of ₹ 4.04 crore[29] from the contractor but the same was not done.

In reply, the Government stated (August 2022) that the rates received against above schemes were 10.04 *per cent* and 8.78 *per cent* below the Probable Amount of Contract (PAC) of ₹ 1,245.27 crore and ₹ 54.96 crore, respectively, hence, additional bank guarantee was not taken.

The reply is not acceptable because the PAC had been revised (August 2018) by Nigam as ₹ 1,431.41 crore and ₹ 62.92 crore, respectively. Hence, additional Bank Guarantee should have been obtained from the contractors.

3.6.7 Irregular release of Bank Guarantee by Nigam

As per Clause 3.5 of Part-III of the Agreement, the security to be taken for due performance of the contract will be equal to 10 *per cent* of the amount of the contract in the form of Bank Guarantee of a Nationalised/ Scheduled bank valid up to one year after the date of completion of the work.

Audit observed that:

- The contractor of Mohkhed Scheme in Chhindwara, had deposited a Bank Guarantee of ₹ 5.49 crore on 6 July 2015. The work was to be completed by 19 March 2017 but was still incomplete. The Nigam, however, released the Bank Guarantee of ₹ 5.49 crore to the contractor on 30 October 2019.
- The Nigam awarded (20 October 2014) the Udgawan Scheme in Datia to a contractor who deposited Bank Guarantee of ₹ 9.04 crore on 30 October 2014. The work was to be completed by 31 January 2018 but was still incomplete. The Nigam, however, released the Bank Guarantee of ₹ 9.04 crore to the contractor on 30 July 2020.

Thus, the Nigam extended undue favour to the contractors by releasing the Bank Guarantee before completion of the works.

---

27 The Works Manual of the Madhya Pradesh Public Works Department was also applicable to the MPJNM as the Department, State Government has circulated a letter dated 20.01.2017 to the Nigam in which condition of the Contract had been changed as per M.P.P.W.D Manual.

28 (Estimated cost ₹ 1431.41 crore less 15 *per cent* of the Estimated cost ₹ 1431.41 crore) less the Contract cost ₹ 1135.96 crore= ₹ 80.74 crore.

29 (Estimated cost ₹ 62.92 crore less 15 *per cent* of the Estimated cost ₹ 62.92 crore) less the Contract cost ₹ 49.44 crore = ₹ 4.04 crore.

In reply, the Government stated (August 2022) that in Udgawan Scheme the work had been substantially completed and an additional work amounting to ₹ 1.69 crore was to be done. In Mohkhed Scheme, the work has been completed. This is why the Bank Guarantees had been released.

The reply is not acceptable because release of Bank Guarantee before expiry of the specified period was irregular.

3.6.8 Irregular release of Performance Security and Security Deposit by PHE Divisions

Clauses 22.1 and 30 of the Agreement stipulated that prior to signing of the contract, the bidder shall have to furnish performance security of five *per cent* of the contract amount, besides, Security Deposit shall be deducted from each running bill at the rate of five *per cent*. Performance Security shall be released after completion of entire operation & maintenance period (24 months) whereas Security Deposit shall be released after defect liability period (12 months).

Audit observed that out of 50 works of Piped Water Supply Schemes in four Divisions (Raisen, Betul, Mandla and Morena):

- Forty works had been executed and completed during 2018-21 and the Performance Security was released after completion of works but before the completion of 24 months of operation & maintenance period.
- Ten works were ongoing, and the Divisions inexplicably released the Performance Security even before completion of the works.

Thus, the irregular release of Performance Security resulted in undue financial benefit to the contractors amounting to ₹ 2.44 crore as detailed in **Appendix 3.14**.

Audit further observed in five works of Mandla, that the Security Deposit was released after completion of the works but before completion of 12 months of defect liability period. This resulted in undue financial benefit to the contractors amounting to ₹ 6.73 lakh as detailed in **Appendix 3.15**.

In reply, the Government stated (August 2022) that the Executive Engineers of all the Divisions have been instructed to take necessary action and release Performance Security and Security Deposit only after the stipulated period as per the Agreement.

The reply is silent about the violation of previous Agreements already committed by the Executive Engineers.

3.7 Monitoring and Quality Control

3.7.1 Irregularities in Monitoring and Quality Control of Schemes by Nigam

The Schemes were planned and executed by the Nigam considering 55 liters *per capita* daily (LPCD) drinking water requirement at seven meter pressure, as per directions issued by the State Government (December 2012).

During the Audit period (2019-21), 12 Schemes[30] covering 241 villages were completed by the Nigam and their operation & maintenance was started. To ensure the quality and quantity of water being supplied by the contractors, the Nigam appointed “Operation & Maintenance-Supervision and Quality Control Consultant” for each completed Scheme.

[30] Narhela, Kirgi, Bhatera, Devsarra, Dhuti, Piparjhari, Byarma, Mohkhed, Manpur, Udgawan, Arniya Bahadur and Niwari Schemes.

Audit observed that:

- In five completed Schemes of 89 villages[31] covering a population of 1,75,065 water supply ranged between 41.68 LPCD and 53.11 LPCD, which was far below the required minimum level of 55 LPCD. Further, in case of 108 villages and 712 households of nine Schemes[32], the contractors did not supply water at the required seven meter pressure.
- In 82 villages coming under Narhela, Manpur, Udgawan and Niwari Schemes, the contractors did not supply water at all in the months of February 2021, December 2020, April 2021 and December 2020 as detailed in **Appendix 3.16**.
- After completion of Schemes, the Nigam recovers Water Charges for supply of water to the villages through Village Water and Sanitation Committees at the subsidized rate of ₹ 3.25 per Kilo Liter on the basis of reading of Bulk Water Supply Meters installed at the entry point of each village.

Audit observed that as on 31 March 2021, the Nigam had completed 19 Schemes[33], in which the water was being supplied by the Nigam to 785 villages. The Nigam has issued bills of ₹ 17.82 crore to the Committees for the water supplied during 2018-19 to 2020-21. However, it could recover ₹ 3.58 crore only from the Committees (31 March 2021). This resulted in short recovery of water charges to the extent of ₹ 14.24 crore[34].

In reply, the Government stated (August 2022) that the drinking water supply was affected due to low voltage, power failure, theft of water taps, illegal tapping, pipeline damage, etc. The reply was silent about short recovery of water charges.

3.7.2 Irregularities in Monitoring and Quality Control of Schemes by PHE Divisions

The issues pertaining to the irregularities observed in monitoring are discussed below:

- As per Clause 23 of 'Special Condition' of the Agreement, the sample of water from each source should be tested at least once in 15 days from District/ Block Laboratory after starting of trial run period.

  Audit observed in five Divisions[35] that the periodic water quality tests were not being carried out at the prescribed intervals. In 51 completed works of two Divisions[36], against 1,088 water samples only 77 were tested during the year 2020-21. In the absence of mandatory periodic testing, the quality of water being supplied to households could not be ensured.

  In reply, the Executive Engineers stated (October 2021) that the contractor had been directed to submit water samples to the District/ Block Laboratory at an interval of 15 days in future.

---

31 Narhela, Byarma, Manpur, Udgawan, and Niwari Schemes.

32 Narhela, Bhatera, Devsarra, Dhuti, Piparjhari, Byarma, Manpur, Udgawan and Niwari Schemes.

33 Mardanpur, Udaipura, Punjapura, Bagod Nadia Pipaliya, Talunkhurd, Arniya Bahadur, Gangabaodi, Narhela, Udgawan, Bhatera, Piparjhari, Mohkhed, Jhurki, Dhuti, Devsarra, Byarma, Kirgi, Manpur and Niwari Schemes.

34 Mardanpur (₹ 3.66 crore), Udaipura (₹ 1.76 crore), Punjapura (₹ 0.51 crore), Bagod Nadia Pipaliya (₹ 2.08 crore), Talunkhurd (₹ 1.31 crore), Arniya Bahadur (₹ 0.20 crore), Gangabaodi (₹ 0.76 crore), Narhela (₹ 0.55 crore), Udgawan ₹ 1.25 crore), Bhatera (₹ 0.36 crore), Piparjhari (₹ 0.21 crore), Mohkhed (₹ 0.08 crore), Jhurki (₹ 0.06 crore), Dhuti (₹ 0.15 crore), Devsarra (₹ 0.16 crore), Byarma (₹ 0.11 crore, Kirgi (₹ 0.54 crore), Manpur (₹ - 0.01 crore) and Niwari (₹ 0.49 crore) Schemes.

35 Barwani, Damoh, Rajgarh, Ratlam and Satna.

36 Betul and Mandla.

- The circular issued (July 2017) by the Department provided for water supply for 70 LPCD. According to 'Special Condition 27' of the Agreement, the contractors had to install a "Bulk Meter" to note the quantity of water distribution. Special Conditions 28 and 29 stipulated that the contractor shall maintain a register regarding distribution of water in the prescribed format.

  Audit observed in all 116 completed works in 10 selected Divisions that Bulk Meters were not installed[37] by the contractors. In the absence of Bulk Meters distribution of water to the households at the rate of 70 LPCD could not be ascertained.

  In reply, the Executive Engineers of Satna, Damoh, Barwani, and Morena stated (October 2021) that Bulk Meters would be installed by the contractors. The Executive Engineer, Ratlam stated (October 2021) that due to non-provision of Bulk Meter in bill of quantity in all the schemes, the same was not installed.

  The reply is not acceptable because installation of Bulk Meter was included in the Bill of Quantity.

- According to the circular issued (January 2015) by the Engineer-in-Chief, a monthly roster of inspection was to be prepared by the Divisions for inspection of the established Schemes, of which 5, 15 and 25 works were to be inspected by the Executive Engineer, the Assistant Engineers, and the Sub Engineers, respectively. The inspection note of each such inspection was to be prepared and sent to the higher office.

  Audit observed that the prescribed inspections were not being carried out by the departmental engineers.

  In reply, the Government stated (August 2022) that Executive Engineers of all the Divisions have been instructed to take necessary action to monitor and ensure quality work in the schemes as per the Agreement, and also visit the Schemes regularly and submit inspection reports to their higher offices.

3.7.3 Results of physical verification

3.7.3.1 Physical verification of the Schemes executed by the Nigam

During joint physical verification of three Completed Schemes (Narhela, Udgawan and Niwari) and three sample villages[38] of each of these Schemes by the Audit Team along with officials of Nigam, the contractors and the consultants, the following deficiencies were observed:

- In five villages[39] water supply was deficient as some habitations were not receiving water at all and in some habitations pressure of water supply was very low.

  In reply, the Government stated (August 2022) that non-supply or inadequate supply of water occurred due to wastage of water through untapped connections, corrective action in this regard was being taken.

- Even though *Gandhari Ka Dera* village under Udgawan Scheme and Dhorera Village under Narhela Scheme were situated in the close proximity of Intake Well/ Water Treatment Plant, but still water connections were not provided to the households of these villages.

---

37 The fact was verified in the joint physical inspection carried out (two Schemes in each selected Division) by Audit with the divisional officers/ officials.

38 Narhela Scheme: Narhela, Patel ka Pura and Kashipur. Udagawan Scheme: Gandhari ka Dera, Agora and Dangkarera. Niwari Scheme: Bhitri, Devri Kalaru and Beejour.

39 Narhela Scheme: Narhela, Patel ka Pura and Kashipur. Niwari Scheme: Bhitri and Devri Kalaru.

In reply, the Government stated (August 2022) that in *Gandhari ka Dera* village connections have been provided to all the households except some households where water supply was technically not possible. Further, Dhorera village was to be covered under Chambal Multi Village Scheme.

The reply is factually incorrect as they have not provided any supporting documents to Audit.

3.7.3.2 Results of physical verification of PHE Divisions

During joint physical verification in four villages (Mandla and Barwani Divisions) with the Departmental Representatives the following deficiencies were observed by Audit:

- In *Newsamal* and *Gaujhi* villages of Mandla, sensor-based auto cut-off system was not installed at the borewell and pumphouse.
- In *Newsamal* and *Gaujhi* villages of Mandla and *Sulgaon* village of Barwani, water disinfection system was not installed.
- In *Gaujhi* village of Mandla, water level indicator and in *Semli* village of Barwani, lightening conductor on over-head tank were not installed.

Thus, monitoring of the works was deficient.

In reply, the Government stated (August 2022) that the Executive Engineers of these Divisions have been instructed to make sure that after completion of Schemes it should be operated & maintained by the contractors for the period as mentioned in the Agreements.

3.8 Conclusion

Audit observed the following deficiencies:

- The Guidelines issued by the State Government and provisions of the Manual issued by the Ministry of Drinking Water and Sanitation, Government of India, for preparation of Detailed Project Reports have not been complied with in several cases.
- Schemes have been delayed inordinately without fixing accountability in this regard.
- The contractors have been benefitted through inadmissible payments, non-recovery of liquidated damages, irregular advance payments, irregular release of Performance Security/Security Deposit, etc.
- No efforts have been made to recharge the water sources to ensure their sustainability.
- The Department and the Nigam also failed to provide water of adequate quality and quantity due to deficient Monitoring and Operation & Maintenance of the works/ Schemes.

3.9 Recommendations

Audit recommends that:

- Drinking Water Schemes should be approved after ensuring technical and sustainability aspect and it should be planed as per Guidelines and provisions of the Manual.
- Allocation of funds for the schemes and utilisation thereof should be based on assessment of requirements.
- The implementation of Schemes should be synchronised for timely completion of schemes.

- The Department should make conscious and timely efforts to recharge the water sources to ensure their sustainability.
- The Department and the Nigam should ensure an effective Quality Control and Monitoring System to ensure the supply of qualitative and quantitative drinking water to the habitants.

CHAPTER – IV
ENERGY DEPARTMENT

Chapter-IV
ENERGY DEPARTMENT

Compliance Audit on "Construction, Operation & Maintenance of Power House-II of Shree Singaji Thermal Power Station, Khandwa of Madhya Pradesh Power Generating Company Limited"

Summary

Audit covered the construction and operational performance of the PH-II of the Shree Singaji Thermal Power Station (SSTPS), Khandwa from the period of preparation of feasibility study in the year 2009-10 by the consultant upto the commissioning of plant on 28 March 2019, including operational performance till 31 March 2021.

During the audit of SSTPS, Khandwa and Corporate office of Company at Jabalpur, the following observations were noticed: -

- *Due to improper planning and delay in pre-execution activities of the project loss of ROE benefit, avoidable payment of water charges, non-availing of the benefit of Clean Development Mechanism (CDM).*
- *Foregone Interest During Construction (IDC) /Incidental Expenditure During Construction (IEDC) claims due to delay in payment of advance to Contractor, additional payment of ERV, slippage of project schedule, delay in completion of CHP, delay in commissioning of AHP, delay in commissioning of Boiler Auxiliaries, deficiencies in supplies of mandatory spares, non-conduct of performance guarantee test.*
- *Delay in execution of work and grant of undue extension of time to contractor.*
- *Non achievement of PAF and PLF against target by MPERC, higher GSHR of frequent tripping, higher auxiliary consumption, high fuel oil consumption.*
- *Reduction in GCV between loading ends at mines and unloading end at TPS, shortage of coal, excess un-burnt coal in bottom and fly ash.*
- *Failure of Turbines installed in PH-losses led to non-recovery of fixed out.*
- *Excess stack emission, non-compliance of ash utilisation norms of MOEF&CC, excess specific water consumption.*

***These instances of shortcomings, in aggregate, involved an overall impact of* ₹ 2,113.01 crore.**

4.1 Introduction

The Madhya Pradesh Power Generating Company Limited, Jabalpur (Company) was incorporated (November 2001) as a wholly owned Company of Government of Madhya

Pradesh (GoMP). The Company was operating four Thermal Power Stations (TPSs)[1] with a total installed capacity of 5,400 Mega Watt[2] (MW).

In its endeavour to supply bulk power to the Malwa-Nimar region, Government of Madhya Pradesh (GoMP) approved (January 2008) the Malwa Thermal Power project of 4 X 600 MW capacity (Power House I & II). However, based on the recommendation[3] of Expert Advisory Committee (EAC), the Environmental Clearance (EC) for only two units (2x600MW) was accorded (October 2008) by the Ministry of Environment and Forest (MoEF), Government of India (GoI).

The Company appointed (October 2010) M/s Ramkey Enviro Engineers Limited as a consultant (Consultant) for preparing pre-Feasibility Report (FR) of the Power House–II (PH-II) of the TPS. The FR[4] submitted (December 2010) by the consultant justified the installation of (2x660MW), Shree Singaji Thermal Power Station (SSTPS), PH-II to bridge the widening gap between projected demand and supply.

The GoMP (January 2011) and the Board of Directors (BoD) of the Company (December 2011) accorded administrative approval for installation of SSTPS, PH-II of 2x660 MW at an estimated cost of ₹ 6,500 crore.

4.2 Organisational Structure of the Company

The Company is under the overall administrative control of the Department of Energy, GoMP, headed by the Additional Chief Secretary (ACS)/ Principal Secretary. The day-to-day management of the Company is vested with a Board of Directors (BoD). The Managing Director (MD) is the Chief Executive Officer of the Company, who is assisted by Director (Technical), Director (Commercial), Chief Financial Officer, Executive Directors (EDs), Chief Engineers (CEs) and Company Secretary. Each TPS, is headed by a CE, who is assisted by Additional CEs (ACEs) and Superintending Engineers (SEs) who looks after regular operation and maintenance at respective TPS.

4.3 Audit Objective

The Compliance Audit was conducted with a view to assess-

- Whether the construction work of the TPS was executed as per the Detailed Project Report and works were awarded and executed in a prudent manner, and
- Whether the TPS was operated and maintained as per the norms determined by Madhya Pradesh Electricity Regulatory Commission, GoMP and the Company, to obtain the envisaged output.

---

[1] In a thermal Power Station heat energy obtained from combustion of coal is converted into Electric Energy. In the process of electric power generation, steam-operated turbines convert heat into mechanical power and then finally to electric power.

[2] ATPS Chachai 210 MW, SGTPS Birsinghpur 1340 MW, STPS, Sarni 1330MW and SSTPS Khandwa 2520 MW.

[3] Owing to limited availability of coal i.e. 4.62 MTPA linkage with the Company.

[4] Envisaged the peak Demand Deficit of 14.4 *per cent* and 10.7 per *cent*, Peak Energy Deficit of 19.0 *per cent* and 10.6 *per cent* during the year 2009-10 and 2010-11 respectively.

4.4 Scope and Methodology of Audit

Audit covered the construction and operational performance of the PH-II of the SSTPS since preparation of feasibility study in the year 2009-10 by the consultant till the commissioning[5] of plant including operational performance till 31 March 2021.

The records relating to construction of the PH-II were analysed at the corporate office of the Company at Jabalpur and the records of operational performance were analysed at SSTPS, Khandwa.

Entry conference was held in July 2021 wherein the Audit Objectives and Criteria were discussed with the Management along with explanation of the process to be followed during audit. The Audit Report was discussed with the Government/ Management of the Company in the Exit Meeting held in June 2022 and the views of Government/ Management have been incorporated suitably in the Report.

4.5 Audit Criteria

The audit findings have been derived against the following criterion:

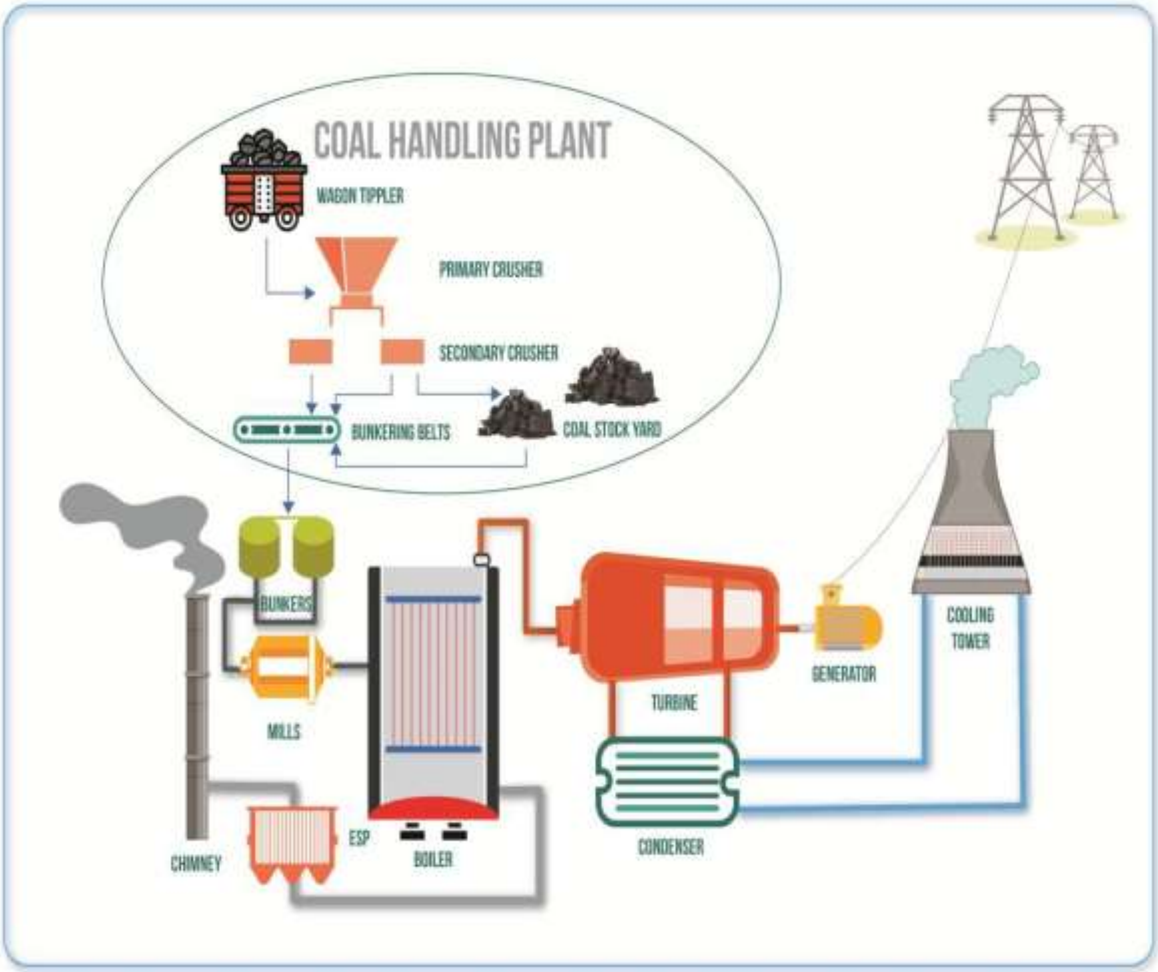
1. Policy and Guidelines issued by the Government of India (GoI), Government of Madhya Pradesh (GoMP), Central Electricity Authority (CEA)/ Central Electricity Regulatory Commission (CERC)/ Madhya Pradesh Electricity Regulatory Commission (MPERC);
2. Guidelines/ Environmental Norms issued by the Ministry of Environment and Forest (MoEF), GoI/GoMP, Central/Madhya Pradesh Pollution Control Board (CPCB/MPPCB) and other Statutory Authorities;
3. Agenda /Minutes of the meetings of Board of Directors/ Business Committee, MIS reports submitted to MPERC/ CEA/ MPPCB; and
4. Feasibility/ Detailed Project Report, terms and conditions stipulated in the Tender Documents/ Contract Agreements/ Fuel Supply Agreements/ Power Purchase Agreements, etc.

4.6 Power generation process of Thermal Power Station

The schematic diagram of the generation process in a TPS is given in **Chart 4.1** below:

5 Unit-3 of the plant was commissioned 18th November 2018 and Unit-4 of the plant was commissioned on 28th March 2019.

Chart 4.1:Generation process in TPS



In TPSs, high pressure steam produced in the boiler rotates the Turbine connected to the Generator, where the electricity is generated.

4.7 Construction of the Project

The DPR of the Project, finalised in March 2012, envisaged the cost of the Project at ₹ 6,499.93 crore, which was revised (September 2017) to ₹ 7,738.00 crore[6]. The GoMP accorded its approval (March 2019) for the revised cost and the MPERC too, through the final generation tariff order dated 18 May 2021, approved the revised Project cost.

The total expenditure incurred on the Project till 30 September 2021, as against the total approved Project cost, and its source of funding is given in **Table 4.1** below:

Table 4.1: Details of Project Expenditure

(₹ in crore)

Particular	Total	Equity from GoMP	Loan from Power Finance Corporation
Approved project cost	7,738.00	1,547.60	6,190.40
Expenditure up to 30 September 2021	6,757.01	1,300.20	5,456.81
***Percentage* of Expenditure with total cost**	***87.32***	***84.01***	***88.15***

6 Due to installation of Flue Gas Desulfurization (FGD) equipment (required as per the new environmental norms 2015), applicability of water charges and Goods and Service Tax (GST), increase in Price Variation (PV) and Exchange Rate Variation (ERV).

Audit findings

The Audit findings on the construction of the Project broadly cover the issues on Draft Project Report, obtaining of required clearances, arranging of fuel, and tendering and execution of the Project, including the performance guarantee test of the plant.

The Audit findings on operation and maintenance of the Project broadly cover the operational performance of the plant against various operational parameters, analysis of major forced outages and compliances with various environmental and safety norms.

4.8 Planning of the Project

The Audit findings relating to planning and pre-execution activities are discussed in the succeeding paragraphs.

4.8.1 Delay in various stages of Project led to foregoing of Return on Equity benefit

The MPERC Generation Tariff Regulation[7] allows the power generating companies to recover Return on Equity (RoE) at the rate of 15.5 *per cent* per annum for Thermal Generating Stations. It further allows an additional return of 0.5 *per cent* for those extension projects of 660 MW and above, which complete their first unit within 50 months and the second unit within 56 months from the date of investment approval by the Board of the generating company.

The GoMP accorded its administrative approval for installation of Project in January 2011 and the BoD of the Company, despite unavailability of confirmed coal linkage[8], accorded approval for the Project on 14 December 2011.

The GoI granted Environmental Clearance (EC)[9] for the Project in August 2014 and the Company placed the work orders[10] for the Project in September 2014 i.e. 32 months after the approval of Project by BoD. The Units 3 and 4 were completed on 18 November 2018 and 28 March 2019 respectively. MPERC allows a period of 50 months and 56 months respectively for completion of two Units from the date of investment approval by BoD *i.e.* 14 December 2011. As such there was a delay in completion of the two units by 33 months 4 days and 31 months 14 days respectively from the date of investment approval by the BoD.

The Company claimed (February 2020) the RoE at the rate of 16 *per cent* in its Tariff Petition (No.-25 of 2020). The MPERC, however, disallowed additional (0.5 *per cent*) RoE on the grounds that both the units (Unit-3 and 4) of the Project could not be completed within the stipulated time period.

Thus, the Company failed to schedule the Project approval strategically, and monitor the Project execution schedule to ensure timely completion of work, so as to gain additional RoE. The time lapsed in the process of obtaining firm coal linkage, EC, delays in project execution together led to delay in achieving Commercial Operation Date (CoD) from the stipulated time

---

7 Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

8 As per MoEFCC, GoI, circular (November 2010) a thermal power project would be considered for Environmental Clearance (EC) only if it had a firm coal linkage.

9 On the assurance given (July 2014) by the Company to divert the 6.6 MTPA coal allocated for units of Satpura TPS, Sarni, which were soon to be phased out.

10 Wherein, the time limit for COD of unit 3 and 4 was 43 and 47 months respectively.

period and deprived the Company of the benefit of additional RoE to the extent of ₹ 120.75 crore[11] during the life (25 years) of the power plant.

The Government stated (May 2022) that the Ministry of Power (MoP), GoI intimated (September 2010) that it had forwarded its recommendations to Ministry of Coal (MoC), GoI for allocation of coal linkage for SSTPs, PH-II. Accordingly, the GoMP had accorded its approval for the Project. It was further stated that date of "Investment Approval" was not clearly defined in the MPERC's Regulation 2009 (for control period 2010-12) and Regulation 2012 (for control period 2014-16) for completion of project within the timeline specified, hence Effective Date of the contract was considered as 'Investment Approval Date'.

The reply confirms that the approval was accorded in anticipation of the coal linkage and no firm linkage was obtained till the time of approval. Further, Government's claim that the date of Investment Approval was not clearly defined in the MPERC Regulation 2009 and 2012 is factually incorrect as these Regulations clearly stated that, "*The completion time schedule shall be reckoned from the date of investment approval by Board (of the Generating Company), up to the Date of CoD of the Units*."

4.8.2 Avoidable payment of water charges ₹ 67.80 crore

To cater to the need of water for operation and maintenance of both PH I and II, the Company obtained (August 2013) the allocation of water from Water Resource Department (WRD) for supply of 75.60 million cubic meter (MCM)[12] per year and executed Water Supply Agreement (WSA) (February 2015) with WRD, GoMP for supply of water to both PH I and II. As per the terms of the WSA, the Company was liable to pay for 90 *per cent* of the total quantity of annual allocated water or actual quantity of water drawn, whichever is higher at the rate of ₹ 5.50 per Cu. m. Further, as per the provisions of MP Irrigation Rule, 1974[13], the water charges for Unit 3 and 4 became payable from August 2015 i.e. after six months from the date of entering in to WSA.

The WRD, considering the far-off schedule completion[14] of PH-II, suggested (May 2016) the Company to enter into a separate WSA for PH-II and avoid the payment of water charges.

However, the Company did not enter into a separate WSA for PH-II and it had to pay ₹ 67.80 crore towards water charges during the period from August 2015 to November 2018 for Unit-3 and till March 2019 for Unit-4 without consuming any water.

Government stated (May 2022) that water allocation was mandatory requirement for obtaining EC as well as Coal Linkage for the Project and if the water allocation for stage –II had been surrendered, it might have posed a threat to the project due to unavailability of water when needed.

Reply confirms that mere allocation of water was sufficient for obtaining the EC which the Company had already obtained in August 2013 and was valid till August 2019[15], i.e. beyond

11 ₹ 149.85 crore (RoE per year allowed by MPERC at 15.5 *per cent)* * 0.5 *per cent*/ 15.5 *per cent* = ₹ 4.83 crore per year * 25 years = ₹120.75 crore.

12 Unit-1 & 2: 18 MCM each and Unit-3 & 4: 19.80 MCM each.

13 Company may fix different dates for start of production for different Units but the difference could not be more than six months.

14 July 2018 for Unit-3 and November 2018 for Unit-4.

15 As per clause (d) of the Gazette Notification, dated 22.06.2013, water allocation order would be deemed as cancelled in cases where the industrial units had not started industrial production up to 72 months (August 2019) from the date of issuance of water allocation order (August 2013).

the schedule completion of PH-II. Thus, had the Company entered into a separate WSA for PH-II it could avoid the infructuous payment of ₹ 67.80 crore towards water charges.

4.8.3 Non-availing of the benefit of Clean Development Mechanism (CDM)

The Feasibility Report as well as Detailed Project Report envisaged the CDM[16] benefits on adoption of Supercritical technology as it would result in enhanced plant efficiency and reduce the coal consumption. Projected revenue from sale of carbon credits in 10 years was ₹ 2,289.07 crore.

The Company did not approach the Designated National Authority (DNA)[17] to register the Project as CDM project with United Nations Framework Convention of Climate Change (UNFCCC). The issue of non-registration of the then projects of the Company for CDM benefits was included in CAG's Audit Report (Commercial) for the year 2009-10. In response, the Company had stated (October 2010) that their ongoing projects including SSTPS PH-I were based on sub-critical technology which did not qualify for the CDM benefits.

Government stated (May 2022) that none of the Super Critical Thermal Power Plants in India, received the CDM benefits possibly because of emission reductions due to efficient technologies *vis-a-vis* the baseline emission, hence registering the project with DNA of UNFCCC for sale of carbon credits would have been a futile exercise. Further, the Company would have been benefitted with the notional revenue of ₹ 36.30 crore only because of reduction in the prices of CER during the year 2013 to 2020. It further informed (June 2022) that the registration of the Project could be done only up to the date of its COD.

The reply indicates that the Company would have realised the revenue of ₹ 36.30 crore if it had registered the project with DNA before COD of the project. Further, the reply that registering the project with DNA would have been a futile exercise, is an afterthought only as no considered decision of Management in this regard was available on the records.

4.9 Tendering and execution of Contracts for Plant

The Company initiated (July 2012) tendering process for installation of Project on complete Engineering, Procurement and Construction (EPC) basis and finalised the same in August 2013, wherein, M/s L&T EPC Power Vadodara (EPC Contractor) emerged as the L1 bidder with a total cost of ₹ 5,134.75 crore. Company intimated the same to EPC Contractor (October 2013) stating that the Letter of Award (LoA) would be issued only after receipt of Environment Clearance (EC) from the Ministry of Environment& Forest (MoEF), Government of India (GoI).

4.9.1 Foregone Interest During Construction (IDC)/ Incidental Expenditure During Construction (IEDC) claims due to delay in payment of advance to Contractor

The Generation Tariff Regulations of MPERC allows Generator to recover, through tariff, the cost of Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC) respectively, incurred during the construction of a power project.

---

[16] The CDM, defined in Article 12 of the Kyoto Protocol under the UNFCCC, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO2, which can be counted towards meeting Kyoto targets.

[17] In India the Ministry of Environment, Forest and Climate changes, Government of India was nominated as DNA.

The Company decided[18] (31 August 2013) that the Effective Date (Zero Date) of contract would be the date of issue of LoA and the payment of advances was to be made within 60 days from the issue of LoA. In case the payment was delayed due to Owner's fault beyond 60 days, the Effective Date (Zero Date) was to be extended accordingly.

The Company issued LOA on 04 September 2014 and paid the initial advance of ₹ 375.07 crore to the Contractor during December 2014 to June 2015. As the delay in payment of advance was for more than 60 days, the date of payment of first advance i.e. 31 December 2014, was treated as effective date and scheduled COD[19] of both the units were accordingly shifted to 31 July 2018 and 30 November 2018 from 03 April 2018 and 03 August 2018 for Unit 3 and Unit 4 respectively.

As the delay in payment of initial advances was attributable to the petitioner (Company), the MPERC, while fixing (May 2021) the first Generation Tariff for Unit 3 and 4, disallowed the IDC of ₹ 185.47 crore and IEDC of ₹ 29.56 crore for the delayed period of 118 days.

Audit observed that:

- Despite having the budget (2014-15) provision of ₹ 360 crore, the Company approached the GoMP belatedly (01 October 2014) for disbursement of funds, which were received on 25 November 2014, leading to delay in the payment of advance to the Contractor, consequently delaying the Project by deferring the scheduled COD, and
- The Company had not drawn the funds from loan of ₹ 4,862.17 crore sanctioned (September 2011) by Power Finance Corporation to pay the initial advance amount despite having the power to draw the funds for the similar purpose.

Thus, the Company, despite having the availability of funds, delayed payment of advances to the Contractor and lost the opportunity to recover IDC and IEDC through tariff.

Government stated (May 2022) that restructuring of JV partner companies of EPC contactor was carried out in June 2014 and the EPC contractor intimated the same to the Company after issue of LOA on 08 September 2014. Thereafter the Company sought legal opinion from Advocate General GoMP who concurred to the restructuring on 15 November 2014. After approval of BoD of the Company on 25 November 2014, EPC contractor was asked to submit further documents, which it did on 26 December 2014. Thereafter the advance was released.

The reply is not acceptable as the EPC Contractor (i.e. M/s L&T Power) was selected as L-I bidder in August 2013 and this too was intimated to the Contractor in October 2013, the EPC contractor should have intimated to the Company about restructuring (June 2014) of its partner companies at the time of its restructuring itself. Further, the Company took no action on EPC contractor for delayed intimation and instead the Company itself took entire responsibility for delay in making advance while presenting the case before MPERC thereby losing the opportunity of availing the benefits of IDC and IEDC.

[18] It was as per the terms of LOA issued on 04 September 2014.

[19] Scheduled COD was 43 months and 47 months from the effective date in respect of Unit 3 and 4 respectively.

4.9.2 Payment of additional Exchange Rate Variation (ERV)

The Company issued (04 September 2014) five LoAs to EPC Contractor for setting up of the Project. Two contracts included payment in foreign currencies[20]. As per the contracts, the materials were to be supplied before scheduled COD of the projects and the prices of the material quoted in foreign currencies were to be paid in the respective foreign currencies against supply of material.

Audit observed that there was an upward trend in the foreign currency exchange rates and the Company had not included any clause in the agreements to restrict the additional payment on account of upward revision in foreign currency exchange rates for delayed supplies, beyond scheduled COD.

The Company had to incur an additional expenditure of ₹ 3.38 crore[21] due to increase in exchange rates after the scheduled COD of Unit-4 (November 2018) against supply of material worth ₹ 57.28 crore, quoted in foreign currencies which was supplied during November 2018 to June 2021.

Government stated (May 2022) that if ceiling had been kept on payment of ERVs, there is a possibility that the contractors would have quoted higher prices to cover the unforeseen loss on account of adverse forex rates, which would have resulted in higher price bids.

The reply is not cogent as the price variations are allowed till scheduled COD as a general prudence and the contractors are to be penalised for delays thereafter. Not restricting the payment of ERV up to scheduled COD resulted in avoidable payment of ERV of ₹ 3.38 crore up to June 2021 and the burden of ERV would further increase when the supplies of remaining material would be received on later dates.

4.9.3 Slippage of Project schedule

As per the agreement with the EPC Contractor, Liquidated Damages (LD) at the rate of 0.5 *per cent* of the contract price for a delay of one week or a part thereof beyond the date of scheduled completion[22], subjected to a maximum of 10 *per cent* of the contract price[23] was to be levied on the contractor.

The Company achieved the Commercial Operation Date (COD) of Unit-3 on 18th November 2018 with a delay of 110 days and of Unit-4 on 28th March 2019 with a delay of 118 days**.**

The delay in commissioning of both the units had resulted in generation losses of 3069.79 MU[24] (at 85 *per cent* PLF) energy. This forced the GoMP to procure costlier energy from other sources and imposed an additional burden of ₹ 102.32 crore on GoMP.

The Company, on the request (January/June 2018) of Contractor, granted provisional extension of time for completion of Unit-3 up to 30 November 2018 and Unit-4 up to 31 March 2019 keeping in reserve, the right of the Company to recover LD. However, the time extension has not been finalised so far (October 2021). Considering the delay in

---

[20] USD 25.504 million, EURO 8.706 million & JPY 2339.046 million in first contract and USD 58.453 million, EURO 7.541 million, JPY 2761.184 million & local (Indian) supplies/services of ₹ 29,703.602 million in the second contract.

[21] Calculated as difference in cost due to currency rate variation as on SCOD and actual supply date.

[22] Unit- 3 and 4 were scheduled to be completed by July 2018 and November 2018 respectively.

[23] The Contract price of the first unit (Unit-3) for the purpose of LD was to be taken as 60 *per cent* of the total contract price and that of second unit (Unit-4) as 40 *per cent* of contract price.

[24] (1481.04 MU =15.84 MU x 85 *per cent* x 110 days of Unit 3 and 1588.75 MU = 15.84 MU x 85 *per cent* x 118 days of Unit 4).

achieving the COD, the LD of ₹ 413.25 crore (₹ 240.31 crore[25] for Unit 3 and ₹ 172.94 crore[26] for Unit 4) was to be levied and recovered from the Contractor. However, the Company did not recover the same even after elapse of 31 months from the commissioning (March 2019) of PH-II. The final recovery of LD needs to be watched.

Government accepted (May 2022) that it could not generate 3069.79 MUs of energy. Further, it stated that as per the terms of contracts, LD for delay was to be levied for the reasons solely attributable to the Contractor. A high level committee, constituted by the Company for analysing the reasons for delay, had submitted its recommendations (3 July 2021) to grant extension with levy of LD and the same was under consideration for final decision of the competent authority.

The fact remains that the Company could not finalise the decision for granting time extension to the contractor and penalise the contractor till date (October 2021) for the reasons attributable to the contractor.

The delay in completion of following facilities mainly attributed to delay on commissioning of Project-

4.9.3.1 Delay in completion of Coal Handling Plant

The EPC contract included the work of construction of Coal Handing Plant (CHP) which further included the work of construction of railway siding which were to be completed by 15 December 2017 (Unit 3) and 15 April 2018 (Unit 4) respectively.

However, the work of laying of rail line for Unit 3 could be completed on 23 June 2018 with a delay of 190 days and Unit-4 could be completed on 25 January 2019 with a delay of 285 days.

Government stated (May 2022) that delay in completion of CHP was not the only reason for delay in CoDs of Unit-3 and Unit-4 as major part of CHP, i.e., Wagon Tippler (WT) No 4, WT-3 and Track Hopper No. 2 were completed in June 2018, September 2018 and January 2019 respectively before the actual CoD of both the respective Units.

Reply confirms that the major part of CHP, i.e., Wagon Tippler (WT) No 4, WT-3 were commissioned in June/September 2018 as against their schedule completion date of March 2018 and Track Hopper No. 2 was completed in January 2019 against schedule completion date of July 2018. This had impacted the actual CoD of both the units.

4.9.3.2 Delay in commissioning of Ash Handling Plant (AHP)

The EPC contract included the work of construction of Ash Handling Plant (AHP)[27]. As per the schedule for completion of work, the work of commissioning of AHP was to be completed within the period of 36 months (i.e. up to 31 December 2017) from the Effective Date (31 December 2014) of contract.

However, there was inordinate delay in supply of material required for Fly Ash Handling System and the Company decided to evacuate the 100 *per cent* ash through Bottom/ Wet Ash Disposal System till the final commissioning of Fly Ash Handling System.

---

[25] ₹ 3080.85 crore (60 *per cent* of Contract Price ₹ 5134.75 crore) X 7.8 *per cent* (delay no. of week = 110 days/ 7 = 15.71*0.5 penalty per week).

[26] ₹ 2053.90 crore (40 *per cent* of Contract Price ₹ 5134.75 crore) X 8.42 *per cent* (delay no. of week = 118 days/ 7 = 16.86*0.5 penalty per week).

[27] AHP is established for evacuation of ash from the TPS. There are two types of ash generated from the TPS i.e. Bottom Ash and Fly Ash. The AHP is generally divided in to three types- Fly Ash Handling System, Bottom Ash Handling System and Ash Slurry Disposal System.

The Bottom/ Wet Ash Slurry Disposal System were also completed in July 2018 (Unit 3) and January 2019 (Unit 4) with a delay of seven and nine months respectively.

Government stated (May 2022) that the commissioning of Dry Fly Ash System was delayed due to delay in supply of material by the contractor. However, the Bottom/ Wet Ash Slurry Disposal System was available in July 2018 (for Unit-3) and in January 2019 (for Unit-4) well in advance before achieving actual CoDs.

Reply is not acceptable as to achieve the schedule CoD for Unit-3 (31 July 2018) and Unit-4 (30 November 2018), the process of coal firing/ full load operation was to be started from March 2018 and July 2018, respectively, for which the commissioning of Bottom/ Wet Ash Slurry Disposal System was a prerequisite. However, these facilities were commissioned in July 2018 and January 2019, which resulted in delayed CoDs of both the units.

4.9.3.3 Failure of Electrostatic Precipitator due to operation of plant without complete erection of Ash Handling Plant

During the review of records, it was noticed that due to evacuation of 100 *per cent* ash through Bottom Ash Disposal System/ Ash Slurry Disposal System till December 2019 and partial completion of Bottom Ash Disposal System/ Ash Slurry Disposal System, the Electrostatic Precipitator (ESP)[28] of Unit-3 and 4 stopped working on 10 June 2019 and 14 June 2019 respectively due to choking issues and problem in de-ashing and resultant deposition of ash in the hoppers of ESP. As a result, both the units went under forced shutdown for 335.17 hours and 160.57 hours respectively causing generation loss of 327.52 MUs and consequent loss of ₹ 47.56 crore[29] due to non-recovery of fixed cost during shutdown period. The Company, however, did not initiate any action against the contractor for the substandard work and delayed completion of work.

Government, while accepting the audit observation, stated (May 2022) that the contractor delayed the commissioning of Dry Fly Ash System and entire ash generated was evacuated from Bottom/ Wet Ash Slurry Disposal System, causing choking. Further, the Company had proposed to penalise the contractor for delay in commissioning of Dry Fly Ash System. However, the fact remains that the Company had suffered the generation loss of 327.52 MUs and consequent loss of ₹ 47.56 crore due to delayed commissioning of AHP and proposal to penalise the contractor is still in process.

4.9.3.4 Delay in commissioning of Boiler Auxiliaries

Boiler[30] forms an imperative part of the EPC contract. The Contractor delayed the supply of material and the commissioning of boiler auxiliaries of Unit-4 and these boiler auxiliaries could be commissioned only in November 2018 with a delay of four months**.** This resulted in

---

[28] Electrostatic Precipitator (ESP) is an electro-mechanical equipment installed for cleaning the flue gases emitted from the TPSs. The substances i.e. fumes, fly ash and suspended dirt from the gas stream collected from the flue gases, goes to the hoppers fitted with the ESP from where it is either transported to fly ash silos or sent to ash pond in the form of ash slurry.

[29] Annual Generation on 100 per cent NAPAF-11,563.20 MUs, Annual Generation on 85 *per cent* NAPAF-9828.72 MUs, Annual Capacity (fixed) charges- ₹ 1,427.20 crore, total generation loss due to ESP problem-327.52 MUs. Thus loss of capacity (fixed) charges due to ESP problem is –₹ 1,427.20 crore * 327.52 MUs / 9828.72 MUs =₹ 47.56 crore.

[30] Boiler is an enclosed pressure vessel in which water is converted into steam by gaining heat from any source (coal, oil, gas etc.). It accumulates the steam and build up a pressure to expend it in turbine and convert thermal energy to mechanical energy. The Boiler contains many auxiliaries such as Air-Pre Heater (APH), Induced Draft Fan (ID Fan), Forced Draft Fan (FD Fan), Pulveriser Mills etc. Commissioning of these auxiliaries are required before start of trial run to achieve the final commissioning of any of the unit of a TPS.

deferment of various stages of trial run to be conducted before the final commissioning/COD of the Unit.

Government accepted the audit observation and stated (May 2022) that the Contractor delayed the supply of requisite material, hence there were delays in erection/ commissioning of Boiler Auxiliaries, and consequently the CoD of Unit-4 was delayed. The decision of grant of time extension is under consideration of competent authority and the amount of LD would be decided and levied accordingly.

The fact remains that despite acknowledging the fault of the contractor, Company had not levied any penalty on the contractor so far.

4.9.4 Deficiencies in supplies of mandatory spares

Of the five LOAs issued to the EPC contractor, the two LOAs were issued for off shore supply and on shore supply of materials of ₹ 3,937.35 crore (including mandatory spares of ₹ 226.99 crore). The Contractor was required to supply all the materials and equipment including the mandatory[31] spares within the period of 39 months (i.e. up to March 2018) and 43 months (i.e. up to July 2018) for Unit-3 and 4 respectively from the effective date of contract (December 2014).

Audit observed that the Contractor did not supply the mandatory spares worth ₹ 4.40 crore under various packages under Onshore Supplies and Offshore Supplies till March 2022. Further, the Company had to procure mandatory spares valuing ₹ 2.83 crore, at the risk and cost of the Contractor. The risk and cost amount, worked out to ₹ 2.24 crore, had not been recovered from the Contractor.

Government while accepting (May 2022) the audit observation stated the Company would recover the risk and cost amount, incurred in procurement of spares in case the contractor would not supply the same in future.

The reply confirms the pendency of mandatory spares even up to March 2022 and that the Company had not yet (June 2022) recovered the ‘risk and cost’ amount from the contractor.

4.9.5 Non-conduct of Performance Guarantee Test

As per the contract agreement, the Performance Guarantee (PG) Test[32] was to be conducted within three months after achieving the COD. Further, as per the Appendix12 of contract agreement *“if the contractor fails to meet the specified Performance Guarantees within 90 days from Commissioning or within reasonable period as agreed, the Owner may at its discretion reject the equipment/system and recover the payment already made or accept the equipment / system only after levying liquidated damages”***.**

Unit-3 was stopped twice during the period from May 2019 to July 2020 for total 149.22 hours for PG Test, however it could not be conducted for no reasons on record, and the Company suffered the generation loss of 98.58 MUs (valuing ₹ 41.12 crore) and Fixed cost of ₹ 14.06 crore. Similarly, Unit-4 was stopped from 12 May 2021 to 13 May 2021 for 23 hours for preparatory works and the PG test was conducted in July- August 2021. The results of the PG test are still awaited (November 2021).

---

31 Additional spares kept for emergency use.

32 Performance Guarantee (PG) Test is the test conducted to check the plant performance and efficiency after some time (i.e. time prescribed in the contract agreement with the Original Equipment Manufacturer (OEM) for conducting PG Test) of its Commercial Operation Date (COD). Under the Test, all the major and critical parameters disclosed in the contract agreement with the OEM, are observed and plant is taken to its full rated capacity. In the event the OEM fails to demonstrate/ achieve the guaranteed parameters, they are liable for the penalty.

In the absence of the results of PG test of unit-4 and non-conduct of PG test for unit-3, the Company could not verify the guaranteed parameters mentioned in the contract agreement.

Government stated (May 2022) that both the units were kept under shut down of attending problems therein and for arranging preparatory works required for conducting PG test. Further, the PG test report of Unit-4 as submitted by the contractor was under review and the PG test for Unit 3 would be conducted as and when the system would be offered by the contractor.

The fact remains that despite several shutdowns for attending major/ minor defects and preparatory works for conducting the PG test of Unit-3, the same could not be performed so far (May 2022) and report of PG test of Unit-4 could not be finalised.

4.10 Execution of Civil Works

In addition to the five contracts awarded to EPC contractor on 04 September 2014, 13 allied civil works (including 2 deposit works executed by Indian Railways) were awarded by the Company. Audit scrutinized 11 works (excluding works executed by Indian Railways) of which four works were awarded on EPC basis and remaining works were awarded on percentage Rate Contract[33] basis.

4.10.1 Delay in execution of work and grant of undue extension of time to contractor

According to terms/ clauses EPC Contract and Percentage rate contracts, awarded for execution of various civil works, the Contractor was liable to pay Liquidated Damages (LD) for non-completion of work within the time specified in the contract. The Company in the following two cases granted time extension to the contractors on unjustified grounds, without levy of penalties:

- The Company awarded (February 2016) the General civil work package of 2X660 MW of SSTPS on EPC[34] basis with a cost of ₹ 104.40 crore. The scope of work mainly included the work of construction of 599 residential quarters and other allied civil works. As per the terms (Clause 5.19 of General Conditions of EPC Contract) of the contract, the Contractor was liable to pay Liquidated Damages (LD) at the rate 0.5 *per cent* of the contract price per week or part thereof for the delay in completion of work subject to maximum 10 *per cent* of the contract price.

The work was completed (July 2019) with delay of 16 months from the schedule completion date (February 2018). The Company granted final time extension (May 2019) for 18 months for different reasons[35] without the levy of LD.

Audit observed that out of above extension period, the time extension of four months was on the grounds[36] which were not justified. Thus, by grant of time extension on the above reasons, the Company extended the undue financial benefits of ₹ 4.65 crore to contractor by not levying LD.

---

[33] In Percentage Rate Contract, contractors are required to quote rate as overall percentage above or below the total estimated cost.

[34] Includes carrying out site related investigations including topographical survey, geotechnical investigation before start of work.

[35] Due to the reason of demonetization, ban on extraction of sand, implementation of GST, engineering related issues, non-availability of Ring Main Unit (RMU) for providing power supply at site and shifting of location of sewage treatment plant due to green belt area.

[36] Ban on extraction of sand (two months), engineering related issues (two months).

- The Company awarded (August 2018) the work of constructing 240 Nos. residential quarters (on Percentage rate) with a cost of ₹ 22.42 crore. As per the terms (Clause 2 (a) (i) of the Percentage rate contracts) of the contract, the Contractor was liable to pay Liquidated Damages (LD) at the rate 0.5 *per cent* of the contract price per week or part thereof for the delay in completion of work subject to maximum 10 *per cent* of the contract price.

The work was completed (December 2020) with the delay of about nine months from the stipulated date (31 March 2020). The Company granted (February 2021) the total time extension of eight months and 25 days on various grounds without levy of LD.

Audit observed that some grounds[37] for which the extension of time was granted, were not justified and the contractor was liable for levy of LD of 10 *per cent* of contract amount. However, Company extended undue advantage to the contractor to the tune of ₹ 2.24 crore by not levying LD.

Government stated (May 2022) that the extension of time granted to the contractor for the contract of construction of 599 residential quarter was justified as there was complete ban on extraction of sand from Narmada river in May 2017. Hence, the supply of river sand was instantly stopped which was to be used in flooring, plastering, masonry, water proofing, etc. Further, there were also certain issues in the initial stages regarding design methodology, finish ground level of quarter and road etc. so the work was held up for some period.

Regarding time extension for construction of 240 quarter, it was further stated that due to the imposed ban on sand mining in August 2019 and June 2020 which resulted in scarcity of sand. Further, the work was also held up on account of excessive rain during monsoon in 2019 and by-election of the constituency of Mandhata. Hence, the extension of time given was justified.

Reply is not acceptable as these reasons do not come under the category of *force majeure* as the completion period given in the contract was inclusive of monsoon season and ban on sand mining is common occurrence during monsoons etc.

4.11 Operational Performance

The Unit 3 and Unit 4 achieved COD on 18 November 2018 and 28 March 2019 respectively. The MPERC, in response to the Tariff Petition filed (February 2020) by the Company, issued (May 2021) Tariff order[38] for the year 2018-19. The MPERC, further issued (19 May 2021) the Multi Year Tariff (MYT) for Company's thermal and hydel power stations and determined various operation norms for control period of Financial Year 2019-20 to 2023-24. The operational performance of the PH-II has been measured with the various operational norms determined by the MPERC.

The operational performance of the PH, *vis-a-vis* parameters is discussed below-

[37] Scarcity of sand (4 month and 10 days), excessive rains (1 month) and by-election (15 days).

[38] Which contained various operational norms for GCV of coal, plant load factor, station heat rate, fuel oil (HFO and LDO) consumption and auxiliary consumption.

4.11.1 Plant Availability Factor (PAF)

The MPERC has fixed PAF[39] target of 85 *per cent* for PH-II during the years 2018-19 to 2021-22. The details of target/actual PAF and fixed cost allowed/earned during the period from 2018-19 to 2021-22 are given in **Table 4.2** below:

Table 4.2: The details of PAF and fixed cost during 2018-19 to 2021-22

	PAF (*per cent*)		Fixed charges (₹ in crore)		
Year	**MPERC Norms**	**Actual**	**Fixed cost allowed by MPERC**	**Earned by company**	**Shortfall**
2018-19	85	85.29	274.08	274.08	Nil
2019-20	85	71.64	1,427.20	1,202.89	224.31
2020-21	85	38.78	1,392.44	632.30	760.14
2021-22 (up to August 2021)	85	46.59	569.25	312.07	257.18
			3,662.97	**2,421.33**	**1,241.63**

It can be seen from the table that the overall PAF achieved by PH-II (Unit-3 and 4) ranged between 38.78 *per cent* and 85.29 *per cent* during the period from 2018-19 to 2021-22. The Plant could achieve PAF as per MPERC norms only during 2018-19. Non-achievement of PAF as per MPERC norms during 2019-20 to 2021-22 resulted in under recovery of the fixed cost to the extent of ₹ 1,241.63 crore[40]. The main reason for not achieving the targeted PAF by PH-II was excessive forced and planned outages during above period.

The Government agreed (May 2022) with the audit observation and stated that low PAF is attributable to shortage of coal and shutdowns/ trippings due to various reasons.

Reply is not convincing as the plant is not running with the expected efficiency as committed by the EPC contractor due to frequent shutdowns/ trippings, yet the Government is indifferent towards the PG test (as discussed in para 10.5) which would make the EPC contractor accountable and thereafter the damages/penalty, if any, for the sub-standard performance of the plant could be levied and recovered.

4.11.2 Plant Load Factor (PLF)

The PLF[41] of Unit-3 (ranged between 13.39 and 84.87 *per cent*[42]) and Unit-4 (ranged between 19.78 and 83.78 *per cent*[43]) remained lower than the norms fixed by MPERC (85 *per cent*) leading to generation loss of 15614.89 MUs.

The major reasons for low PLF were low plant availability due to excessive forced outages; backing down of plant under reserve shutdowns, poor quality of coal and shortage of coal.

The Government agreed (May 2022) with the audit observation and stated that in the initial few years teething issues were observed. The fact, however, remains that the Company failed to comply with the norms of MPERC resulting in lower power generation.

---

[39] Represents the availability of a generating unit to produce electricity in a given period. If the actual PAF achieved by a PH-II was lesser than targeted PAF then the actual recovery of fixed cost would be reduced proportionately for that year.

[40] This includes the amounts mentioned in the paragraph numbers 10.3.3, 10.5, 13.1 and 14 and other minor outages which were not quantified in this report.

[41] PLF means the total sent out energy corresponding to scheduled generation during the period, expressed as a percentage of sent out energy corresponding to installed capacity.

[42] Except in the months of February 2019, March 2019 and January 2020.

[43] Except in the months of January 2020 and July 2021.

4.11.3 Gross Station Heat Rate (GSHR)

Gross Station Heat Rate refers to heat energy, measured in Kilocalorie (kCal), used to generate one unit of electrical energy.

The average GSHR attained by the PH-II since inception was always higher than the MPERC norms. The average GSHR in 2018-19, 2019-20 and 2020-21 was 2441, 2404 and 2339 kCal/kWh respectively as against the prescribed norms of 2175.28 kCal/kWh for the year 2018-19 and 2185.69 kCal/kWh for the Multi-Year (2019-20 to 2023-24).

The reasons as noticed by the audit for higher GSHR were frequent tripping; operation on reduced load due to shortage of coal and backing down of the units as per instruction of SLDC. Thus, the inefficient operation of the units, resulted in consumption of excess 458187.69 MT coal valuing ₹ 189.98 crore.

The Government agreed (May 2022) with the audit observation and stated that GSHR remained higher due to poor performance of HP Heater-6, non-achievement of Auxiliary Pressure Reducing and De-superheating System (APRDS) desired temperature for soot blowing and non-insulation at various locations etc. Actions have been taken to reduce GSHR through insulation on the locations of heat loss, monitoring of steam leakage, tripping analysis and by ensuring supply of good quality coal. The fact, however, remains that the company failed to restrict the station heat rate within prescribed norms of MPERC.

4.11.4 Auxiliary Consumption

The actual auxiliary consumption[44] by PH, always remained higher (6.71 *to* 12.54 *per cent)* than the norms prescribed by MPERC (5.25 to 5.75 *per cent*).

Audit noticed that operation of Units at partial load due to shortage of coal, tripping and thermal backing were the main reasons which could not be controlled by the Company. Thus, the consumption of auxiliary power in excess of norms, resulted in loss of 168.234 MUs valuing ₹ 46.79 crore as shown in **Appendix 4.1.**

The Government agreed (May 2022) with the audit observation and stated that frequent tripping occurred till stabilization period of 1-2 years. Now both the units have been stabilized by resolving the issues involved in frequent tripping. Moreover various steps[45] have been taken for reduction of auxiliary power consumption. The fact, however, remains that the Company failed to restrict the auxiliary consumption within limit/norms prescribed by MPERC.

4.11.5 Fuel oil consumption

The MPERC prescribed the norms for consumption of Secondary Fuel Oil[46] at 0.50 ml/kWh for the period from 2018-19 to 2021-22. Actual consumption of Fuel oil in both the units remained high (between 0.59 ml/kWh and 27.01 ml/kWh) except in two months (January and March 2020) wherein it was 0.36 and 0.02 ml/kWh respectively.

Audit noticed that operation of units at partial load, tripping due to various reasons and thermal backing, were the main reasons for higher consumption of fuel oil.

Thus, inefficient operations of the units led to excess consumption of 15522.41 kilolitre fuel oil valuing ₹ 66.07 crore during the period from 2018-19 to 2021-22 (up to August 2021)**.**

---

44 The quantum of energy consumed by auxiliary equipment of the generating station.

45 By keeping transport air compressor as stand by during idle hours in ash plant, by running only two no. cooling pumps in place of 3 no's, reduction in air washer loading and by adoption of best O&M practices.

46 Comprises of Furnace Oil (FO) and Light Diesel Oil (LDO).

The Government agreed (May 2022) with the audit observation and stated that the units were under initial synchronization and commissioning and thereafter stabilization period wherein number of shut-downs occurred which is normal practice. Further, the units have now been stabilized and various actions have been taken to avoid excess oil consumption. The fact, however, remains that the Company failed to restrict the fuel oil consumption within limit/norms prescribed by MPERC and excess oil consumption worth ₹ 66.07 crore.

4.12 Fuel Management for operation of PH

The deficiencies in management of fuel during the operation of plant are discussed in the succeeding paragraphs.

4.12.1 Reduction in GCV between Loading ends at mines and Unloading end at TPS

The most important quality parameter for coal is its heat value referred to as 'Gross Calorific Value' (GCV). The GCV in relation to thermal generation has been defined in the generation tariff regulations[47] issued by MPERC (December 2015 and February 2020), as "the heat produced in kcal by complete combustion of one kilogram of solid fuel".

The Company entered into the Fuel Supply Agreements (FSA) for SSTPS, Khandwa PH-II (Unit-3 and 4) with Northern Coalfields Limited (NCL) in October 2018 for the Annual Contracted Quantity (ACQ) of 1.79 Million ton per annum (MTPA)[48] and with South Eastern Coalfields Limited (SECL) in May 2019 for the ACQ of 2.083 MTPA[49]. Each year the coal companies declare mine-wise grade of coal, keeping in view the GCV of the respective coal-mine. The bills for supply of coal are raised by the coal companies as per the GCV of coal at loading point and Company claims the Energy Charge Rate (ECR)/Variable Cost as per the GCV received at the unloading end. The Company had engaged CIMFR[50] for sampling and analysis of coal at loading ends at mines as well as at unloading end at TPS.

Since GCV is one of the key factors used for energy billing, Audit compared the GCV 'as billed' by coal companies for coal loaded on to wagons at mines end and GCV of coal 'as received' at the unloading point of the TPS. Audit observed that GCV of coal decreased from the 'as billed' stage to the 'as received' stage, though as per CEA, the GCV values, i.e., GCV 'as billed', 'as received' should be approximately same. During 2018-19 to 2021-22 (August 2021), there was drop in GCV up to 2913 kcal/kg valuing ₹ 71.54 crore[51].

As a particular grade of coal (having bandwidth of 300 Kcal/Kg) cannot change or convert into different grade during its transportation, the above position required in-depth analysis of the reasons for vast drop in GCV. Audit found that though this issue persisted in the Company since long despite engaging the same firm, CIMFR at loading end as well as unloading end, the Company did not make any effort to arrest this reduction. Consequently, the issue persisted during the entire period of November 2018 to August 2021[52].

The Government/ Management informed (June 2022) that variation in coal grade were both ways and sometimes in favour of the Company.

The reply indicates the lackadaisical approach of Management to the problem though the drop in GCV was upto 2913 kCal/kg valuing ₹ 71.54 crore (during 2018-19 to August 2021).

---

47 MPERC (Terms and conditions for Determination of Generation tariff), Regulations.
48 Revised from 1.54 MTPA to 1.79 MTPA
49 Revised from 1.79 MTPA to 2.083 MTPA
50 Central Institute of Mining and Fuel Research (CIMFR) is a constituent laboratory of Council of Scientific and Industrial Research (CSIR) and autonomous body under GOI
51 Calculated after excluding the cases having difference in GCV upto 300 Kcal/Kg
52 Except four months viz December 2018 and April 2019 to June 2019

4.12.2 Shortage of coal resulting into loss of Generation and reduction in claim of fixed cost

As per the regulation of MPERC and the DPR of the Project, the plant was required to keep the coal stock for 30 days corresponding to normative plant availability (i.e. 85 *per cent* as per the norms of CEA) factor of the plant. Further, as the mines[53] of South Eastern Coalfields Limited (SECL), Western Coalfields Limited (WCL) and Northern Coalfields Limited (NCL) were located at distance of around 500 km to 900 km, away from the SSTPS, the Company was required to maintain the stock of coal for at least 25 days as per the methodology[54] framed by CEA.

Audit noticed that the Company failed to arrange continuous and sufficient supply of coal leading to shortage of coal and operation of plant at partial load causing loss of generation during December 2018, April 2019 to June 2019 and again in April and May 2021.

Audit further analysed the reasons of coal shortage and found that:

- The Company failed to appoint Liaisoning contractor timely for coordination among Company, Railways and Coal companies. The Liasoning Contractor was appointed in August 2019 for supplies of coal from NCL and in October 2019 for supplies of coal from WCL and SECL. Therefore, coal supplies during the period of pre-appointment of liasioner i.e. December 2018 to June 2019 were affected, although, there was no problem on the part of Company regarding payment of coal during aforesaid period.
- The main reason for coal shortage during April 2021 and June 2021 was lesser/regulated coal supply due to high outstanding/pending[55] bills of coal companies due to paucity of fund created by huge unrecovered dues[56] from MP Power Management Company (MPPMCL) towards sale of power. The Company, however, did not explore any alternate sources of funds for payment of outstanding dues of Coal companies to ensure the uninterrupted supply of coal.

As a result, the company suffered not only generation loss to the extent of 724.59 MUs during above mentioned months, but also failed to claim the fixed cost to the extent of ₹ 90.92 crore**.**

The Government agreed (May 2022) to the generation loss and stated that shortage of coal restricts declaration of 'Declared Capacity'[57] which ultimately resulted in under recovery of fixed cost due to low PAF.

The reply is not convincing as the Company did not appoint liaisoning contractors timely to ensure the uninterrupted supply of coaland also failed in arranging alternate sources of funds to clear the dues of coal companies.

---

53 As per allocation of coal to the PH-II of SSTPS.

54 Stipulates that the pit head TPSs situated up to 1000 KM away from the mines were required to keep the coal stock for minimum 25 days and for the power plants located up to 1500 KMs away from the coal mines, the availability of coal stock for less than seven days was treated as "Critical Stock Position" and for less than four days is treated as "Super Critical Stock position".

55 ₹ 180.45 crore at the end of June 2019, increased to ₹ 817.93 crore by June 2021 and further up to ₹ 957.65 crore at the end of July 2021.

56 ₹ 1,192 crore in November 2018, increased to ₹ 7,708 crore in June 2021.

57 Declared Capacity (DC) shall mean the capacity of the generating station to deliver ex-bus electricity in MW declared by such generating station in relation to any period of the day or whole of the day, duly taking into account the availability of the fuel.

4.12.3 Excess un-burnt coal in bottom and fly ash

In TPS, the required coal fineness is to be maintained for achieving the optimum efficiency of boiler, otherwise it would result in improper combustion which causes excess release of un-burnt coal particles in the bottom and fly ash, ultimately resulting in excess coal consumption. Audit noticed that there was presence of un-burnt coal more[58] than the prescribed limit[59] in ash, resulting in avoidable loss of 6728.15 MT coal worth ₹ 2.79 crore during the period from November 2018 to March 2021. Mainly, inappropriate coal fineness was responsible for improper combustion resulting in higher amount of unburnt coal.

Government, while accepting audit observation, stated (May 2022) that earlier the sampling method of coal mill fineness was carried-out by traditional method; therefore, measurement was not appropriate. The Company has installed Iso-kinematic Sampler in November 2021 to carry out coal fineness test and now the unburnt coal in bottom and fly ash is below two *per cent*.

The reply is not convincing as unburnt coal in bottom ash was still ranging between 1.47 *per cent* and 1.52 *per cent* in the month of November and December 2021 respectively against the prescribed norm of 0.95 *per cent*.

4.13 Major Outages of PH

4.13.1 Failure of Turbines installed in PH- Losses led to non-recovery of fixed cost

The Unit-3 and Unit-4 were synchronised with the Grid on 07 July 2020 and 11 July 2020 respectively. On 05 August 2020, the unit was hand tripped and on inspection, heavy corrosive deposits and damages in the turbine blades were observed. Similarly, Unit-4 was stopped on 22 September 2020 and heavy scale deposits with small damages in the turbine were observed. The Contractor repaired the damaged turbines of both the Units, free of cost to the Company and the Unit-3 was started on 31 July 2021 after 8627.72 hours of shutdown and Unit-4 was started on 31 March 2021after the shutdown of 4567.78 hours.

The three[60] agencies engaged for the analysis of causes of failure of turbine in their reports, commonly observed the following reasons:

- The "Poor Steam and Water Chemistry" was the primary cause of corrosive deposition (deposition of Sodium, phosphate, Silica contents and Chloride) in the turbine due to partial commissioning of SWAS[61] without Chloride Analyser;
- Testing of water and steam through an out sourced agency due to delayed installation of laboratory facility;
- Non-availability of Sodium and Chloride monitoring (online as well as offline) instruments in CPU[62] system; and
- Non- commissioning of De-humidifier System required for preservation of Turbines.

58 0.95 *per cent* to 3.90 *per cent* in bottom ash and 0.68 *per cent* to 1.90 *per cent* in fly ash.

59 O&M Manual which *inter alia* indicates various parameters of boiler efficiency, prescribed the limit of 0.95 *per cent* un-burnt coal particles in bottom and 0.68 *per cent* in fly ash.

60 National Thermal Power Corporation (NTPC) and M/s TRACTEBEL as an independent agency and also constituted (30 September 2020) a high-level committee, comprising of its high-level officers.

61 Steam and Water Analysis system (SWAS) is a system that helps in monitoring the critical parameters in the steam. These parameters include pH, conductivity, silica, sodium, dissolved oxygen, phosphate and chlorides. A well-designed SWAS must ensure that the sample is representative till the point of analysis.

62 Condensate Polishing Unit (CPU) typically involves Ion Exchange technology for the removal of trace dissolved minerals and suspended matter. During the process of steam generation in power plants, the steam cools and condensate forms. The condensate is collected and then used as boiler feed water.

Thus, the start of the operation of units without the adequate facilities required for monitoring of water and steam chemistry led to failure of turbine and outages of units for a long period leading to loss of ₹ 1044.38 crore in the form of non-recovery of fixed cost during the period of shut down.

Government, while accepting the audit observation, stated (May 2022) that the actual financial loss in the form of non-recovery of fixed cost, would be ₹ 1,007.98 crore for the entire period of shutdown of both the units. It was further stated that, the Company, after achieving the CoD of both units, regularly persuaded the Contractor for completing the balance facilities including the deficiencies in SWAS and CPU system, commissioning of sodium and chloride analyser etc. to monitor the critical steam purity parameters and also to supply the preservation system and Operation and maintenance manual to operate this super critical unit. The Contractor, however, had failed in completing these works timely resulting in failure of both the turbines. It was further stated that the Contractor had repaired both the turbines free of cost and the units are running smoothly.

Reply confirms that though the Company has suffered loss on account of non-recovery of fixed cost due to prolonged shutdowns of both the units and importantly the Company had not penalised/ held the EPC contractor responsible for the loss attributable to incomplete/ inefficient facilities.

4.14 Environmental Compliance

The Ministry of Environment, Forest and Climate Change (MOEF&CC) and Central Pollution Control Board (CPCB)/M.P. Pollution Control Boards have issued various environmental norms to be complied by the TPP. The PH, even being a newly constructed TPP, failed to meet the environmental norms as discussed below-

4.14.1 Excess Stack Emission

The MoEF&CC, GoI, has prescribed (7 December 2015) stack emission standards for the units of TPS to be installed from 1 January 2017. Emission standards have been prescribed for Sulphur Dioxide (SO_2), Oxides of Nitrogen (NOx) and Particulate Matter (PM). Actual emission as against the MoEF&CC norms has been detailed in the **Table 4.3** below:

Table 4.3: Showing Position of Stack emission in SSTPS Power House-II since COD to July 2021

Sl. No.	Parameter	Norms inmg/ Nm^3	Unit no.	Actual emission in mg/Nm^3	Remarks
1	Sulphur Dioxide (SO_2)	100	3	417.83 - 1577.90	Always remained more than norms
			4	428 -1540.18	-do-
2	Oxides of Nitrogen (NOx)	100	3	178.83-552.10	-do-
			4	228.72-617.06	-do-
3	Particulate Matter (PM)	30	3	42.01-559.50	Except in January 2019, when it was 18.48 mg/Nm^3
			4	33.43-739.25	Except in March 2019 and September 2020 when it remained 26.65 and 28.59 mg/Nm^3

As evident from the table, the Company failed in complying with the environmental norms regarding all the parameters shown above and continues to pose a threat to the environment by emitting huge quantities of harmful oxides into the atmosphere.

Government stated (May 2022) that the Company is in process of installing wet Flue-gas desulfurization (FGD) technology-based system to control SO_2 within statutory norms i.e.<100 mg/Nm^3. Action for installation of Selective Non-Catalytic Reduction (SNCR) /Selective Catalytic Reduction (SCR) for control or reduction of NOx; shall be taken only after feedback of installation of SCR/ SNCR from NTPC's pilot projects.

Reply confirms that despite the plant being Super Critical with latest technology, it did not comply with the emission norms and the necessary steps were not taken for controlling the stack emission levels.

4.14.2 Non-compliance of ash utilisation norms of MoEF&CC

MoEF&CC, GoI notified (25 January 2016) that the coal or lignite based TPSs shall comply with the provision of 100 *per cent* utilisation of fly ash generated by them before 31 December 2017. Therefore, SSTPS Ph-II was required to utilize 100 *per cent* ash since its CODs. Year-wise ash utilization in SSTPS Ph-II has been given in the **Table 4.4** below:

Table 4.4: Year wise ash generation and its utilization

Year	Period	Total Ash generated (in MT)	Ash utilized (in MT)	Utilization in *per cent*
2018-19	November 2018 to 31 March 2019	555313.59	0	0
2019-20	April 2019 to March 2020	1163835.55	204479.172	17.57
2020-21	April 2020 to March 2021	188327.218	100005.69	53.10
2021-22	April 2021 to August 2021	447854.434	189478.63	42.31

Low ash utilisation clearly shows Company's inability to comply with the MoEF&CC, GoI's directions. Audit further noticed that NGT, CPCB also imposed fine (July 2020) termed as 'Environmental Compensation' on SSTPS of ₹ 15.83 crore[63] (₹ 7.00 crore for 2018-19 and ₹ 8.83 crore for 2019-20) for non-utilization of 100 *per cent* fly ash by the Company.

The Government stated (May 2022) that recession in real estate & infrastructure sector and impact of Covid-19 pandemic were the reasons for lesser demand/utilization of fly ash.

The fact remains that the Company had not initiated requisite action to promote the ash utilization from the plant. Further, other plants of the Company *viz.* SGTPS Birsinghpur (2019-20: 99.59 *per cent*, 2020-21: 100.10 *per cent* and 2021-22: 71.50 *per cent*) and STPS Sarni (2019-20: 63.72 *per cent*, 2020-21: 94.20 *per cent* and 2021-22: 99.82 *per cent*) performed much better than SSTPS PH-II during similar period. However, the fact remains that the Company failed to comply with the MoEF&CC norms of ash utilization.

4.14.3 Excess Specific water consumption

MoEF&CC, GoI had fixed (28 June 2018) water consumption limit[64] for TPSs. installed after 01 January 2017 and these plants shall also achieve zero waste water discharge.

Audit noticed that the monthly average of water consumption (on actual MWh generation) remained high[65] to the extent of 8696175 Cu. M. valuing ₹ 4.78 crore at the rate of ₹ 5.50 per Cu. m., for the units of PH-II during the period since COD's to August 2021.

The reasons for excess consumption of water were delay in commissioning of Ash water Recovery System, conversion of dry ash into wet ash for pumping into ash pond[66], seepage in

---

63 Including for non-utilization of fly ash of phase I of the project of the Company.

64 As per notification dated 7 December 2015 (amended on 28 June 2018), Specific water consumption shall not exceed maximum of 3.0 Cu. M./MWh for new plants.

65 31906425 Cu. m. of specific water against the required quantity of 23210250 Cu. m. as per norm.

Ash dyke due to poor workmanship, shut downs/ trippings and lit up of units after reserve shut downs (which require huge water for system cleaning), running of units at partial loads and use of water for getting desired temperature of soot blower header

The Government agreed (May 2022) with the reasons of excess water consumption analysed by audit and communicated other reasons, viz. non-commissioning of Ash Water Recovery System, non-availability of sufficient quantities of wastewater for its re-utilization were also responsible. It further stated that construction/erection of Ash Water Recovery System is expected to commission soon; which shall result in reduction of water consumption. The fact, however, remains that the water consumption remained higher than the norms.

4.15 Conclusion

Based on the observations in the previous paragraphs, the following can be concluded:

- The Company did not take action for timely completion of the Project. It did not obtain requisite fuel linkage and clearances in time and had to forgo the benefit of additional RoE amounting to ₹ 120.75 crore. It delayed the payment of advances to the contractor resulting in shifting of Scheduled COD and disallowances of IDC and IEDC by MPERC amounting to ₹ 215.03 crore;
- The Company entered into WSA much before the scheduled COD of the Units resulting in avoidable payment of ₹ 67.80 crore;
- The Company could not complete the Project on the scheduled dates and had to procure power at costlier rates to mitigate the shortfall during the period of delay causing an additional burden of ₹102.32 crore;
- The Company did not ensure completion of various facilities required for running of Plant which resulted in major outages leading to generation loss of 9036.55 MUs and non-recovery of fixed cost of ₹ 1,055.54 crore;
- The Plant failed to meet the operational parameters determined by MPERC which resulted into loss of generation, excess consumption of fuel and non/under recovery of fixed cost; and
- The Company could not adhere to various environmental norms of MoEF&CC regarding stack emission, disposal of ash and water consumption, having adverse impact on the environment.

4.16 Recommendations

We recommend that:

- The Company should plan and arrange all the inputs and obtain necessary clearances for the projects to be taken up in future, so that the same may be completed in time and all the available concessions/ benefits for the project may be availed and power may be made available at the cheaper rates, as envisaged;
- The Company should ensure completion of all facilities required for running of Plant before COD of the Units to avoid outages during operations;

---

[66] Dry fly ash system was not completed with delay in December 2019; therefore the wet ash was being flushed to ash pond which requires higher water consumption. Further, after completion of dry ash system, whenever ash silo of unit no.3 and 4 were filled due to insufficient bulkers for transportation of ash, wet ash was transferred to pond which resulted in higher water consumption.

- The Company should expedite the PG Test of Unit 3 and finalisation of report of PG Test of Unit 4 and ensure that the EPC contractor adheres to its contractual liabilities for deficiencies, if any, in execution of the project;
- The Company should make efforts to operate the Power House within the parameters prescribed by the regulatory authority to keep the cost of generation at desired level; and
- The Company should ensure strict adherence to the environmental norms and regulations.

CHAPTER – V
FOREST DEPARTMENT

Chapter-V
FOREST DEPARMENT

Compliance Audit on "Diversion of Forest Land and Management of Compensatory Afforestation Funds in Madhya Pradesh"

Summary

Audit scrutinized the records relating to the diversion of forest land and the expenditure from the Compensatory Afforestation Funds covering the period 2017-18 to 2019-20. Audit conducted detailed scrutiny of records in 17 Forest Divisions out of 100 Divisions and in the office of the Principal Chief Conservator of Forest (CAMPA). During the scrutiny of records, Audit noticed the following:

- *Non-adherence to specified procedures for forest land diversion, Irregularities in transfer and use of diverted forest land, Irregular diversion of forest land without authorisation, Non/Short transfer of land for Compensatory Afforestation in lieu of diverted forest land, Protected/Reserved Forests not notified, Non-compliance of conditions of sanction, Short/Non-recovery of charges in lieu of diversion of forest land, etc.*
- *Irregularities in implementation of Compensatory Afforestation, Erroneous site selection for afforestation under CAMPA, etc.*
- *Deficiency in plantations against targets, Failure of Compensatory Afforestation plantations.*
- *Unwarranted expenditure on eradication of weeds, Expenditure on ineligible activities under CAMPA, Irregular expenditure on plantations using CAMPA fund.*
- *Doubtful expenditure on Compensatory Afforestation, Irregularities in fund management and procurement, Non-maintenance of separate bank accounts for management of CAMPA funds, Non-maintenance/ upgradation of records.*

These instances of shortcomings, in aggregate, involved an overall impact of ₹ 364.83 crore.

5.1 Introduction

Forests and forest ecosystem serve entire communities and the forest resources meet the needs of the millions. The well-being and socio-economic development of forest fringe dwellers, villagers and others are wholly or in parts dependent on forests. As such, deforestation, and forest degradation as a result of diversion of forest land (for non-forestry purposes) have adverse consequences on lives of people and communities.

Forest land can be diverted for non-forest purposes only with the prior approval of the Government of India. The Ministry of Environment, Forest & Climate Change (MoEFCC) accords clearance to the projects/proposals for diversion of forest land under the provisions of Forest (Conservation) Act, 1980 (FCA).While according clearance to projects on forest land, the MoEFCC imposes measures/restrictions in the form of general, standard and specific conditions such as, levy of Net Present Value (NPV), fund for raising Compensatory Afforestation (CA), Catchment Area Treatment (CAT), reclamation of mines and activities related to protection of biodiversity and wildlife at the project cost. CA is to be carried out in non-forest land/degraded forest (canopy density[1] less than 0.4) identified for the purpose. As per the State of Forest Report, 2019, the open forest[2] inside recorded forest area in State of Madhya Pradesh was 28,223 sq. km. (43.59 *per cent* of forest cover) whereas as per the 2017 Report, it was 27,904 sq. km. (43.28 *per cent* of forest cover). Thus, there was increase in open forest in the State by 1.13 *per cent* between 2017 and 2019.

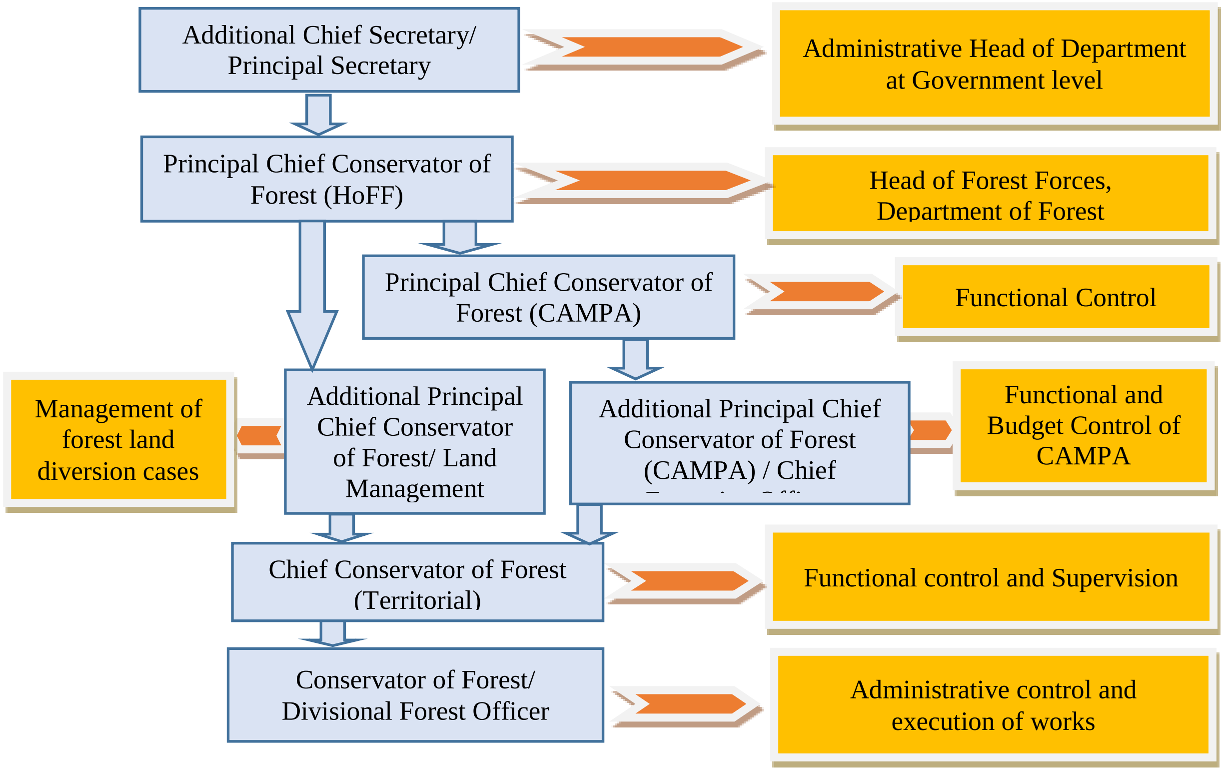
An *Ad-hoc* Compensatory Afforestation Management and Planning Authority (CAMPA) was created (May 2006) under the directions[3] of the Hon'ble Supreme Court as an instrument to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. MoEFCC formulated (July 2009) guidelines for the States for utilisation of funds lying with the *ad-hoc* CAMPA.

The National CAMPA and State CAMPA were created (August 2009) for management of compensatory funds and mitigation activities. Further, the Compensatory Afforestation Fund Act, 2016 (CAF) was enacted on 3 August 2016. The State CAMPA serves as a common repository of the compensatory funds levied on account of mitigation activities.

5.2 Organisational Set up

Forest Department, Madhya Pradesh is headed by the Additional Chief Secretary/ Principal Secretary at the Government level. Principal Chief Conservator of Forests (PCCF), Head of Forest Force is the head of the Department. Management of CAMPA is done by Chief Executive Officer (CEO), CAMPA at the headquarter level, who is supervised by PCCF (CAMPA). Additional Principal Chief Conservator of Forests, Land Management (APCCF, LM) deals with the cases of diversion of forest land for non-forestry purposes. Management of Compensatory Afforestation Fund and processing of cases of diversion of forest land is done by the Divisional Forest Officers (DFO) at Division level.

Chart 5.1: Organisational Set up



1 Canopy density is defined as the ratio of sun light blocked by the vegetation to total sun light falling over the forest.
2 Area having forest cover with canopy density between 0.1 and 0.4.
3 T.N. Godavarman Thirumulpad *vs* Union of India & Others, Writ Petition (Civil) No. 202 of 1995

Each Division is further divided into various ranges and the CF/ DFO is assisted by Sub Divisional Officer (SDO) who in turn is assisted by Range Officers (RO) at the Range level. The RO is assisted by Deputy RO, Foresters and Forest Guards.

5.3 Audit Objectives and Criteria

Audit was conducted between July 2020 and March 2021 with a view to ascertain whether:

- the diversion of forest land for non-forestry purposes was approved by the Competent Authority and the conditions stipulated therein have been complied with;
- the activities were executed in accordance with the objectives of State CAMPA and as per the guidelines issued by MoEFCC/National CAMPA Advisory Committee; and
- monitoring and evaluation mechanisms were in place and working as envisaged.

Audit criteria for the compliance audit were derived from:

- Indian Forest Act, 1927
- Forest (Conservation) Act, 1980 and Forest (Conservation) Rules, 2003,
- Compensatory Afforestation Fund Act, 2016 and Compensatory Afforestation Fund Rules, 2018,
- Scheduled Tribes and other Traditional Forest Dwellers (Forest Rights Recognition) Act, 2006,
- Madhya Pradesh Treasury Code,
- Madhya Pradesh Finance Code,
- State CAMPA and MoEFCC Guidelines, and the orders issued by Hon'ble Supreme Court and GoMP from time to time.

5.4 Audit Methodology

Audit covered the period from 2017-18 to 2019-20 and test checked the records related to diversion of forest land and the expenditure from CA Fund in the office of the PCCF (CAMPA) and 17 Divisions[4] out of 100 Divisions.

An Entry Conference was held with the Principal Secretary (Forests) in November 2020 and the Exit conference was held with PCCF (Land Management and CAMPA) in May 2022.

5.5 Allotment and Expenditure

The CA Fund is created with the amounts received for the Compensatory Afforestation, Net Present Value (NPV), Catchment Area Treatment (CAT), etc. from the agencies which use the forest land. The allotment of funds for CA, protection and conservation works during 2017-20 is shown in **Table 5.1**.

Table 5.1: Allotment and Expenditure during 2017-20

(₹ in crore)

Sl. No.	Year	Funds received	Expenditure[5]
1	2017-18	234.82	228.55
2	2018-19	170.29	269.33
3	2019-20	318.28	342.00
	Total	**723.39**	**839.88**

*(**Source:** Records of Forest Department)*

4 Anuppur, East Chhindwara, Khargone, Khandwa, Indore, Ratlam, Bhopal, Singrauli, South Shahdol, North Sagar, South Sagar, Nauradehi, Hoshangabad, Gwalior, Chhatarpur, North Betul, and Managing Director, Madhya Pradesh State Forest Development Corporation Limited.

5 The Agency received an additional amount of ₹ 123.66 crore as interest during 2016-17 to 2019-20.

5.6 Details of diversion of forest land

Details of cases involving the diversion of forest land for the non-forestry purposes and total forest land diverted during 2017-20 are shown in **Table 5.2** below:

Table 5.2: Cases of diversion of forest land and total forest land diverted during 2017-20

Sl. No.	Year	No. of Cases	Total Diverted Land (in hectare[6])
1	2017-18	34	4430.693
2	2018-19	30	5890.522
3	2019-20	29	1945.462
	Total	**93**	**12266.677**

*(**Source:** Records of Forest Department)*

Audit Findings

5.7 Diversion of forest land

Audit observations related to deficiencies in diversion of forest land are discussed in the succeeding paragraphs:

5.7.1 Non-adherence to procedures in proposals for forest land diversion

The Government of Madhya Pradesh (GoMP), Forest Department instructed (November 2010) that in cases of land diversion up to one hectare[7] (Ha), the DFOs can approve the diversion provided that the certificate of the concerned *Gram Sabha* and District Collector is obtained in respect of completion of identification and settlement of forest rights under Scheduled Tribes and Other Traditional Forest Dwellers (Forest Rights Recognition) Act, 2006 (FRA). According to Section 3(2) of FRA, land diversions for 13 social utilities[8] have been exempted from adhering to the provisions of FCA, 1980, which implies that the diversion will not require payments such as NPV, funds for raising CA, medicinal plantation, *etc*. Further, in respect of diversion of forest land exceeding one Ha, the proposal for diversion of forest land is submitted by the User Agency to the DFO, who on verification of facts mentioned therein, approves the proposal for the diversion of forest land and forwards the proposal to the State Government. The State Government accordingly verifies the facts and forwards the proposal with recommendation for approval of MoEFCC.

During scrutiny of records in 17 Divisions for the period 2013-14 to 2019-20, following irregularities were noticed in the cases of forest land diversion:

- We noticed in 122 cases of diversion of forest land in five Divisions[9] (out of 678 cases in the concerned Divisions) that for an area of 60.01 Ha, involving less than One Ha of forest land diversion in each case, were approved by the concerned DFOs without obtaining certificates of *Gram Sabhas* and District Collectors even though the diversion was approved citing the provisions of the FRA.
- In another seven cases involving diversion of 272.77 Ha in Singrauli, South Sagar and Gwalior Divisions (above One Ha each), the approvals were obtained from the MoEFCC. While granting approvals, the MoEFCC sanctions clearly stipulated that

[6] One hectare represents 10,000 sq. m.
[7] In Naxal-affected Divisions, the power has been granted up to five hectares.
[8] Schools, Dispensary or Hospital, Anganwadis, Fair Price Shops, Electric and Telecommunication lines, Tanks and other minor water bodies, Drinking water supplies and Water pipelines, Water or rainwater harvesting structures, Minor Irrigation Canals, Non-conventional source of energy, Skill upgradation or Vocational Training Centers, Roads, and Community Centers.
[9] Anuppur, Singrauli, South Shahdol, South Sagar and Hoshangabad.

certificates were to be obtained from the concerned District Collectors to the effect that the settlement of rights[10] under FRA has been completed. However, the concerned DFOs did not obtain the certificates in violation of the MoEFCC orders. Thus, the status of the rights of the forest dwellers over the aforesaid forest land was not ascertained by the Divisions. The details are given in **Appendix 5.1**.

In reply, the Government stated (October 2022) that under the FRA, 2006 and FCA 1980, only the approval of the concerned *Gram Sabha* and District Collector is sufficient, and the FRA certificate is not required.

The reply is not acceptable as the *Gram Sabha* and Collectors in similar other cases had issued FRA certificates before the diversions could be approved. Furthermore, the MoEFCC, in all the cases, while approving diversions, clearly instructs the concerned State Government to ensure compliance with FRA, 2006 by way of obtaining necessary certificates from *Gram Sabha*/ Collectors. This clearly proves that the certificates are very much essential and no diversions are to be approved without adhering to the contained FRA provisions.

- The DFO, Hoshangabad approved (February 2016) the diversion of 0.567 hectares forest land for High Tension electric line in favour of Madhya Pradesh Power Transmission Company Limited for Electrification of Jabalpur-Itarsi Railway Line under FRA, 2006. As the construction of High-Tension Electric line was a commercial activity and not covered under FRA, the approval of land diversion was required under the provisions of FCA, 1980. Thus, the non-application of FCA, 1980 resulted in exemption of payments for NPV, CA, Medicinal Plantation, *etc*.

  In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that the issues would be verified, and a detailed reply would be given.

  The Government however, did not reply (January 2023) on the above.

- The Handbook of Guidelines for Forest (Conservation) Act, 1980 and Forest Conservation Rules, 2003 (issued in May 2004 by MoEFCC) stipulates that the ecological and environmental losses and economic distress caused to the people who are displaced should be weighed against the economic and social gains, while considering proposal for diversion of forest land for non-forestry use.

  Audit observed that the cost-benefit analysis was not carried out in respect of five cases (out of 678 cases) involving 658.53 Ha of forest land diversion in four Divisions[11]. In another four cases[12] involving 336.33 Ha, the analysis was done erroneously as several factors such as the total area and true value of fodder (having a notional value of ₹ 1.02 crore) were either not accounted for or were wrongly calculated and the projects were depicted as beneficial as detailed in **Appendix 5.2.**

  Thus, besides causing ecological and environmental hazards, these projects resulted in economic loss to the dependent people without a comparable asset creation.

  Reply of the Government is awaited (January 2023).

---

10 Settlement of rights means that the Department has to ensure that the claim of rights of tribals and traditional forest dwellers such as holding of and living in the forest land, accessibility to collect use and right to dispose of minor forest produce, *etc*. are not pending.

11 Singrouli, Nauradehi, South Shahdol, and Bhopal (for the period from 2014-15 to 2018-19).

12 Upgradation of NH-69, Bathura Open Cast Mines, Methane Gas Extraction Project, Shahdol, and Surajpura Tank.

5.7.2 Irregularities in transfer and use of diverted forest land

As per Part- II of Form 'A' prescribed under Rule 6 of Forest Conservation Rules, 2003, while seeking the diversion of forest land for non-forestry purposes, it is the responsibility of the DFO to verify the requirement of forest land and certify that it is unavoidable and barest minimum for the project.

- Audit noticed that the Department diverted 2,731 Ha of forest land in favour of Narmada Valley Development Corporation (NVDC) for Sardar Sarovar Project in September 1987. However, 2,809.943 Ha forest land was submerged under the Project. Chief Conservator of Forests (LM) intimated (January 2008) this to Inspector General (Forest Conservation), MoEFCC and requested to accord sanction of GoI in this regard. However, even after a lapse of 13 years, due to laxity in pursuance, revised sanction of MoEFCC had not been received and 78.943 Ha of forest land was being used for non-forestry purpose in violation of FCA, 1980.

  In reply, the Government stated (October 2022) that in the meeting held (June 2017) to discuss the issues, the User Agency was asked to submit the FRA[13] Certificate and the User Agency has been instructed to submit an online proposal for seeking approval for the additional area diverted. The same is awaited (January 2023).

- Audit observed that in 10 cases involving three Divisions[14], four User Agencies[15] applied for the diversion of 32 Ha of forest land for construction of roads. The requirement was based on the width of roads, which ranged from 8.90 metres to 18.08 metres. However, the DFOs, while approving the diversion, considered the width of the roads between four and eight metres, and accordingly approved the diversion of 20.23 Ha of forest land as against the 32 Ha demanded by the User Agencies.

  For short transfer of 11.77 Ha of forest land NPV amounting to ₹ 1.21 crore was realisable but could not be realised. The details are in **Appendix 5.3**.

  In reply, the Government stated (October 2022) that land was diverted according to the demand and the user agencies were not permitted to execute work on any additional forest land over what was actually approved for diversion.

  The reply is incorrect because verification of departmental records revealed that in respect of two User Agencies[16] the actual diversion exceeded the sanctioned diversion. The concerned DFO[17], had accordingly called for explanation from the User Agency (MPRRDA) in this regard. Thus, the possibility of illegal diversion by the other User Agencies as well, cannot be ruled out.

5.7.3 Irregular diversion of forest land without authorisation

MoEFCC approved (April 2018) diversion of 16.392 Ha of forest land in Singrauli Division[18] to a User Agency (M/s Northern Coalfields Ltd) for an open cast coal mine.

Audit observed that as against the approved forest land diversion of 16.392 Ha, the Department transferred 35.972 hectares to the User Agency. The transfer was done in two phases-19.58 Ha in October 2018 and thereafter an additional 16.392 Ha was transferred in September 2020.

[13] Scheduled Tribes and Other Traditional Forest Dwellers (Forest Rights Recognition) Act, 2006
[14] Anuppur, South Shahdol and South Sagar.
[15] Madhya Pradesh Rural Road Development Authority (MPRRDA), Rural Engineering Services Department, Madhya Pradesh Road Development Corporation (MPRDC) and Public Works Department.
[16] MPRRDA and MPRDC.
[17] DFO (General), Anuppur
[18] Compartment No. P-266.

There were neither any recorded reasons to justify the transfer of additional land nor was the same authorised by the MoEFFCC. This resulted in irregular transfer of 19.58 Ha forest land in violation of the provisions of FCA, 1980.

In reply, the Government stated (October 2022) that the above incidence had occurred due to error caused by the DFO.

The reply is silent on the action to be taken against the concerned Division/Official for the violation of the provisions of the FCA, 1980 through irregular diversion of forest land without authorisation.

It is recommended that action may be taken against the concerned official who was responsible for irregular diversion.

5.7.4 Non/Short transfer of land for CA in lieu of diverted forest land

Para 3.2 of Handbook of Guidelines issued (May 2004) by MoEFCC stipulates that CA is to be raised on suitable non-forest land, equivalent to the area proposed for diversion, at the cost to be paid by User Agency. As per Para 3.4 of the *ibid* guidelines, the transfer (of land *in lieu of* diverted forest land) must take prior to the commencement of the Project.

5.7.4.1 Audit noticed in three cases of three Divisions[19] that 140.95 Ha equivalent revenue land was to be obtained from the User Agencies against the forest land diverted for non-forestry purposes. However, 69.32 Ha non-forest land could not be obtained from User Agencies even after a lapse of 22 months to 52 months after the approval of the MoEFCC, as detailed in **Appendix 5.4**. However, the Department did not make any efforts to receive the land from User Agencies. Thus, the Department transferred forest land without receiving an equivalent land from the User Agencies.

In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that cases shall be scrutinised.

Reply of the Government is awaited (January 2023).

5.7.4.2 MoEFCC accorded (May 2014) sanction for the diversion of 35.44 Ha forest land for the construction of a barrage in Anuppur District to the MB Power (MP) Limited. Audit noticed that the User Agency had provided 37.11 Ha non-forest land as against the said approval. However, the land provided by the User Agency contained a road and high-tension lines involving 4.33 Ha. Thus, the effective land provided was 32.78 Ha, resulting in short receipt of 2.66 Ha land which affected the CA activities.

In reply, the Government stated (October 2022) that the land received was in equivalence with the land allotted to the User Agency.

The reply is not acceptable because the land obtained was not equivalent as it contained a part of road and the high-tension lines, which effectively reduced the actual area available for afforestation.

5.7.5 Protected/ Reserved Forests not notified

General Conditions of approval of forest land diversion by MoEFCC state that the non-forest land which has been transferred and mutated in favour of the State Forest Department for the purpose of CA shall be declared as Reserved Forest (RF) under Section 4 or Protected Forest (PF) under Section 29 of the Indian Forest Act, 1927 (IFA).

---

[19] Anuppur, Singrauli and South Shahdol.

Audit observed that in 15 cases involving nine Divisions[20], 563.79 Ha of non-forest land for CA *in lieu of* diverted forest land was received but the same was not notified as RF or PF under the relevant sections of IFA even after delays ranging from 13 months to 70 months after the approval of the MoEFCC, as detailed in **Appendix 5.4**. Reasons for the delays in notifying the non-forest land as PF/RF were not available in the records produced to Audit. Due to non-notification of non-forest land as RF or PF, the land could not be brought under the ambit of legal provisions and safeguard as envisaged in IFA.

In reply, the Government stated (October 2022) that the process for notification of non-forest land is being expedited. Further progress has not been intimated (January 2023).

5.7.6 Non-compliance of conditions of sanction

MoEFCC stipulates project-specific conditions in the sanctions for diversion of forest land for non-forestry purposes. These conditions are in addition to collection of NPV and implementation of CA. The compliance with these conditions is important in order to restore the ecological balance and mitigation of damage made to the environment.

5.7.6.1 Audit observed that in 28 cases involving 11 Divisions[21], the conditions of sanctions of MoEFCC were not complied with after approval of the land diversion. The delay in compliance ranged between four months and 84 months (details are given in **Appendix 5.5)**. The issues pertaining to non-compliance are discussed in **Table 5.3** below:

Table No. 5.3: Details of non-compliance with sanction conditions

Sl No.	No. of diversion cases/ Divisions	Specific condition in the sanction order	Remarks (Delay period)
1.	05/04	Gap plantations were to be carried out to fill the voids in surrounding forest areas of mines.	Not complied (4 months to 56 months)
2.	09/07	Soil and moisture conservation activities were to be carried out	Not complied (4 months to 70 months)
3.	24/10	Diverted forest land was to be clearly demarcated by erecting pillars, fencing or boundary marking.	Not complied (4 months to 84 months)
4.	04/03	Muck Disposal Plans were to be prepared.	Not complied (18 months to 70 months)
5.	03/02	Catchment Area Treatment Plans were to be prepared.	Not complied (10 months to 69 months)
6.	02/02	Reclamation Plans for closed mines were to be executed once mining activities were over.	Not complied (56 months to 68 months)

5.7.6.2 Detailed Project Report (DPR) is a preliminary document which must be prepared by the concerned Divisions (and must be approved by the Competent Authority) before carrying out plantations and allied activities, including estimates of all the works pertaining to the plantations, *etc*. It is only after the approval of DPRs that project costs can be recovered from the User Agencies.

Audit noticed that out of 40 activities (pertaining to 28 Projects) the DPRs were prepared and approved for 10 activities only. And the project cost amounting to ₹ 1.68 crore had been recovered for nine DPRs whereas project cost of ₹ 52.86 lakh was yet to be obtained from the

[20] Anuppur, Singrauli, Hoshangabad, South Shahdol, East Chhindwara, Gwalior, Chhatarpur, Khandwa and Ratlam..

[21] Anuppur, Singrauli, Nauradehi, Hoshangabad, North Sagar, South Shahdol, South Sagar, East Chhindwara, Gwalior, Chhattarpur and North Betul.

concerned User Agencies. Thus, due to non-preparation of the DPRs plantation activities could not be taken up.

In reply, the Government stated (October 2022) that the requisite actions would be taken.

Further progress has not been intimated (January 2023).

5.7.7 Short/Non-recovery of charges in lieu of diversion of forest land

According to Rule 8 of Forest Conservation (Rules), 2003, on receipt of in-principle approval, the DFO shall prepare a demand note of compensatory levies to be paid by the User Agency and communicate the same within ten days of the receipt of a copy of the in-principle approval. The User Agency shall, within 30 days of receipt of demand note, make payment of compensatory levies. The charges *inter alia* include the following:

- Net Present Value (NPV) of the forests based on the class and category of forests,
- Compensatory Afforestation Costs based on DPRs,
- Charges for Entry Point Activities, Human Resources Development, and Monitoring & Evaluation at the rate of 12 *per cent*, three *per cent* and 20 *per cent*, respectively of the total project cost of the CA,
- Supervision Charges at the rate of 10 *per cent* of project cost of CA (including Charges for Entry Point Activities, Human Resources Development, and Monitoring & Evaluation), and
- Charges for protection and conservation of wildlife at the rate of 10 *per cent* of the project cost (costs incurred by the User Agency for activities in the diverted forest land).

Issues arising from non/short levy of the aforesaid charges are discussed in the succeeding paragraphs.

5.7.7.1 Non-recovery of NPV

The GoMP, Forest Department, issued (December 2003) directions to recover NPV, provisionally at the minimum rate of ₹ 5.80 lakh per Ha. The GoMP in view of orders (March and May 2008) of the Hon'ble Supreme Court, prescribed (September 2008) that NPV will be charged at the rates ranging from ₹ 4.38 lakh to ₹ 10.43 lakh per Ha in accordance with the eco-value and density of the forest. The NPV rates fixed (September 2008) were for a period of three years and were subject to revision thereafter as per judgement (March 2008) of Hon'ble Supreme Court.

Audit noticed in two cases of Khargone and Ratlam Divisions that NPV amounting to ₹ 30.27 lakh[22] on account of diversion of 12.835 Ha of forest land was not recovered by the Divisions.

In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that, case wise detailed reply would be furnished.

Further reply/progress in this matter is awaited (January 2023).

---

[22]

11 kV Dharampuri to Palaskhut electricity line	₹ 17.75 lakh (2.835 Ha × ₹ 6.26 lakh per Ha)
Kaneri Reservoir Project	₹ 12.52 lakh (10 Ha × ₹ 1.252 lakh per Ha)
Total	**₹ 30.27 lakh for 12.835 ha**

5.7.7.2 Short recovery of Compensatory Afforestation costs

Chief Conservator of Forests (Land Survey) issued (February 2002) instructions for preparation of DPR and stated that Divisions would prepare DPR as per site specific requirements and in accordance with that monies would be demanded from the User Agency.

Audit noticed in four projects of the three Divisions[23] that:

- In the DPRs of two projects, labour rates lower than the prevailing market rates had been considered. This resulted in short realisation of CA costs amounting to ₹ 1.15 crore.
- In two projects, the DPRs were to be revised in view of the revised instructions (September 2013) which necessitated recovery of additional charges of ₹ 2.90 crore for CA. But the same was not realised from the User Agencies.

Thus, laxity on the part of the Divisions in recovering CA costs from the User Agencies resulted in short recovery of ₹ 4.05 crore. The details are given in **Appendix 5.6**.

Government's reply is awaited (January 2023).

5.7.7.3 Short/Non-recovery of funds for Entry Point Activities, Human Resources Development and Monitoring & Evaluation due to incorrect DPR estimates

The CCF (Land Survey) issued (February 2002 and February 2004) instructions to incorporate the provisions for Entry Point Activity (EPA), Human Resource Development (HRD) and Monitoring & Evaluation (M&E) at the rate of 12 *per cent*, three *per cent* and 20 *per cent* respectively of the total project cost of the CA.

Audit observed in five cases (out of 678 cases) of land diversion in four Divisions that in accordance with the above provisions an amount of ₹ 2.42 crore was to be provisioned for EPA, HRD and M&E activities[24] in the DPRs. But the Department incorrectly calculated the costs as ₹ 0.53 crore which resulted in short realisation of charges by ₹ 1.89 crore as detailed in **Appendix 5.7**.

In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that a detailed reply would be furnished after scrutiny of cases.

Government's reply is awaited (January 2023).

5.7.7.4 Short recovery of other charges

The GoMP, Forest Department, issued (December 2004) directions to recover the amount of Supervision Charges from the User Agencies at the rate of 10 *per cent* of project cost of CA, except in respect of those projects involving Government Departments. The amount so realised shall be remitted in Revenue Receipt Head of the State Government. In each case of diversion of forest land from Wildlife Sanctuary, PCCF (Wildlife) imposes levy of charges *in lieu of* wildlife protection and conservation.

The issues pertaining to short recovery of the aforesaid charges are discussed below:

Sl. No.	Irregularity	Description
1	Short/Non-recovery of Supervision Charges	In five cases under Anuppur and Gwalior Divisions, the Department, while calculating the amount of Supervision Charges, excluded the expenditure on EPA, HRD, M&E, chain-link fencing, *etc*. which were part of the DPRs. This resulted in short recovery of Supervision Charges amounting to ₹ 31.58 lakh, as

[23] Khandwa, Chhatarpur and North Betul.

[24] EPA at the rate of 12 *per cent* of DPR : ₹ 0.83 crore
HRD at the rate of 3 *per cent* of DPR : ₹ 0.21 crore
M&E at the rate of 20 *per cent* of DPR : ₹ 1.38 crore

		detailed in **Appendix 5.8**.
2	Short/Non-recovery of Protection and Conservation charges of Wildlife	• In one road work[25], Nauradehi Division erroneously collected ₹ 8.18 lakh as against ₹ 13.94 lakh, being five *per cent* of the project cost. This resulted in short realisation of wildlife protection charges of ₹ 5.76 lakh. • In another road work[26], Nauradehi Division irregularly excluded 'Project Development and other Charges' amounting to ₹ 5.66 crore while arriving at the project cost. Consequently, the Division calculated and realised wildlife protection charges amounting to ₹ 1.13 crore, instead of ₹ 1.42 crore, resulting in short realisation of ₹ 28.56 lakh.

In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that a detailed reply would be furnished after scrutiny of the cases.

Further progress/ reply in this regard is awaited (January 2023).

5.8. Implementation of conservation measures

5.8.1 Irregularities in implementation of Compensatory Afforestation

CA is one of the most important conditions stipulated by the GoI while approving proposals for de-reservation or diversion of forest land for non-forest uses. It is essential that for all such proposals, a comprehensive scheme for CA is formulated and submitted to the GoI. The purpose of CA is to compensate for the loss of land 'by land' and for loss of trees 'by trees'[27].

The irregularities observed in the process of implementation of CA are discussed below:

5.8.1.1 Erroneous Detailed Project Reports

The Department prepares DPRs for a period of ten years for the purpose of CA. The PCCF (LM) issued (September 2013) instructions that DPR of a CA may be prepared for execution from two years after submission of proposal for land diversion, as approval of land diversion and release of fund for CA usually takes two years, and prices may be adjusted accordingly. The labour rate for subsequent years should be increased 10 *per cent* annually.

Audit observed in respect of 12 CA Projects in eight Divisions[28] that:

- DPRs were prepared by keeping the current year as the base year instead of keeping the third year (after the current year) as the base year.
- Labour rates were to be increased by 10 *per cent* every year. However, the provisions for price escalation for labour were not followed in the DPRs and the labour costs remained fixed for the entire period in the DPRs.

Thus, due to incorrect provisioning of costs in the DPRs, an amount of ₹14.64 crore was short realised from the User Agencies as detailed in **Appendix 5.9**.

In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that case-wise reply would be provided. Further progress/ reply in this regard is awaited (January 2023).

5.8.1.2 Erroneous site selection for afforestation under CAMPA

Para 2.4 of the Handbook of Guidelines issued (May 2004) by MoEFCC stipulates that any degraded forest land selected by the State Government for the purpose of CA may be accepted by MoEFCC only if the canopy density of the area is below 40 *per cent*. Further, as per Standard Conditions for sanction of forest land diversion for laying of transmission lines, the

25 Somkheda-Suhela Approach Road (₹ 2.79 crore).
26 Upgradation of Rehli-Tendukheda Road (₹ 283.13 crore).
27 Handbook of Guidelines of CAMPA.
28 Singrauli, South Shahdol, South Sagar, Gwalior, Khandwa, Chhatarpur, Indore and Ratlam.

user agency shall prepare a detailed scheme for plantation of dwarf species (preferably medicinal plants) in right of way under the transmission lines.

Audit observed that:

- In 11 projects under four Divisions[29], 875 Ha of the forest land was selected for the CA plantations at 18 different sites by the Divisions. Cross-verification of records revealed that these sites had canopy density of more than 40 *per cent*. As such, the same was to be disregarded and alternate degraded forest lands were to be selected. Lapse on the part of the concerned DFOs in verifying the forest quality resulted in erroneous site selection. The details are given in **Appendix 5.10.**

  In reply the Government stated that in some cases, sites with canopy density higher than 40 *per cent* were selected prior to 2016 as the system of survey by Forest Survey of India, Dehradun was not in place at that point of time. However, after 2016, such cases had been taken care of as proper survey is carried out before plantation.

  The reply is incorrect because all the cases of erroneous site selection pointed out by Audit pertain to the period after 2016, when the system of prior survey was in vogue.

- In Singrauli Division, the CCF, Rewa approved (May 2017) CA plantations at eight sites covering an area of 300 Ha at a total cost of ₹ 16.40 crore. In February 2020, the sanction was cancelled by the CCF, Rewa as the sites selected had thick forest or had plantations under other schemes. Subsequently, the CCF sanctioned (February 2020) CA plantations at five new sites covering an area of 200 Ha.

  Audit observed that the Divisions had already incurred an expenditure of ₹ 1.51 crore towards raising plantations on three sites which had since been cancelled. Thus, failure of the Divisions to verify the quality/status of the sites before selecting them for CA plantations resulted in infructuous expenditure amounting to ₹ 1.51 crore.

  In reply, the Government stated (October 2022) that the sites had been changed as the previously selected sites either had dense forest or the land had been transferred to another agency or the land had already been included in some other plantation schemes. Government further stated that, no expenditure had been incurred on these sites.

  The reply is not correct because the documents, as verified by Audit revealed that expenditure of ₹ 1.51 crore had been incurred on these sites.

- In three projects involving laying of transmission lines under Gwalior Division, dwarf species were not planted on the Right of Way under transmission line in violation of the sanction order of the MoEFCC and Standard Conditions for sanction of forest land diversion. Thus, the objective of providing a green cover on the Right of Way was not achieved.

  In reply, the Government stated (October 2022) that plantation has been carried out on the proposed sites.

  The reply is not acceptable because no documents were provided to Audit to support the Government's reply.

[29] Anuppur, Singrauli, Hoshangabad and South Shahdol

5.9 Issues pertaining to plantations raised in Compensatory Afforestation

5.9.1 Deficiency in plantations against targets

The CCF (Land Survey) issued (February 2002) instructions to provide for plantation of minimum 1600 saplings *per* Ha in DPR of a CA project.

Audit observed that in five CA projects in three Divisions, DPRs for plantations in an area of 201.08 Ha (in nine sites) were prepared. As against a minimum of 3,02,363 saplings to be planted as per norms, the Divisions planted only 2,31,090 saplings. Thus, there was shortfall in plantation of 71,273 saplings which could compromise the successful implementation of the CA projects in these sites. The details are given in **Table 5.4** below:

Table 5.4: Short realisation of plantation targets

Project Site (Division)	Area under CA	Trees to be planted	Trees actually planted
Sirsaud (Gwalior)	3.24	5,189	2,011
Sirsaud (Gwalior)	1.00	1,600	400
Kasera (Chhatarpur)	49.64	60,067[30]	40,000
P-1611 and P-1612 (North Betul)	49.00	78,400	54,439
R-121, 158, 222 and 400 (North Betul)	98.19	1,57,107	1,34,240
Total	**201.08**	**3,02,363**	**2,31,090**

*(**Source:** Records of Forest Department)*

In reply, the Government stated (October 2022) that fewer plants were planted as plantation sites already had *rootstock*[31]. So, it was not possible to plant 1600 saplings per hectare.

The reply is not acceptable as the issue of *rootstock* existed only in Kasera Project, which was already considered by Audit while arriving at the annual target for plantation.

5.9.2 Failure of Compensatory Afforestation plantations

In view of the orders of the Hon'ble Supreme Court (September 2000), the CCF (Land Survey) Madhya Pradesh, issued instructions (February 2004) to the Divisions to achieve a minimum 75 *per cent* survival rate in respect of CA plantations. The instructions also stated that the responsibility would be fixed for loss in the cases of plantations with survival rate below 75 *per cent* survival and a recovery would accordingly be effected from erring officials on *pro-rata* basis

Audit observed that five project/plantation sites of CA in Anuppur, North Sagar and Gwalior Divisions were initiated between 2010-11 and 2014-15. Out of 2,79,790 saplings planted, only 1,02,320 survived. The survival rate in these projects ranged between six *per cent* and 61.90 *per cent* due to lack of irrigation, fertilizer and pesticides. Thus, failure of the Divisions to monitor the plantations and take adequate steps to ensure their successful propagation resulted in infructuous expenditure amounting to ₹ 86.77 lakh.

In reply, the Government stated (October 2022) that in Anuppur, due to extreme cold the plants have been affected. In North Sagar, rectification works have been initiated with revised project from balance fund at one site and at another site medicinal plants did not survive due to excessive heat conditions. In Gwalior Division, plantation had failed due to fire at one site and

30 As per criteria 49.642 Ha x 1600 saplings= 79,427 saplings were to be planted. However, 390 saplings per Ha were obtained from cut back operation i.e.49.642 Ha x 390=19,360 saplings. Hence, the target for the year was 79,427-19,360=60,067.

31 A *rootstock* is part of a plant, often an underground part, from which new above-ground growth can be produced.

at another site, the survival percentage of the plants was satisfactory. The Government also stated that action has been taken against the concerned officials.

Details of action taken had not been intimated (January 2023).

5.10 Irregular expenditure from CAMPA funds

5.10.1 Unwarranted expenditure on eradication of weeds

Para 6.3.2 of Management Plan for Nauradehi Wildlife Sanctuary for the period 2007-08 to 2016-17 *inter alia* provided for treatment of weeds in relocated villages. The Plan stipulated that the weeds should be eradicated only if they were causing any adverse impact on wildlife habitat, otherwise not. Weed eradication was to be repeated for one to two years upon achieving resurgence status in the following years.

Audit observed in Nauradehi Wildlife Division that in eight relocated villages, DPRs were prepared (December 2019 and January 2020) for development of grasslands and fence for *Chital*. In these selected sites, a single weed eradication work was provided in the DPRs. The Division, in violation of the Management Plans, executed the weed eradication work multiple times within one year as detailed in **Table 5.5** below:

Table 5.5: Chronology of various works executed

(₹ in lakh)

Nature of work	Period of execution	Amount
Eradication of 'High Density weed'	December 2019	9,43,704
Eradication of 'Medium Density weed'	January 2020	5,72,220
Eradication of 'Low Density weed'	February 2020	4,05,450
Eradication of 'Lantana and Brushwood'	December 2019 and June 2020	17,20,485

Since the 'High Density weed eradication' work covered all types of weeds including lantana and brushwood, the expenditure incurred on eradication of medium and low density weed as well as on lantana and brushwood was unnecessary and resulted in unwarranted extra expenditure of ₹ 26.98 lakh.

In reply, the Government stated (October 2022) that the weed-grown up/ partially grown up are sighted within a few months after eradication of high-density weeds. This necessitates eradication again.

The reply is not acceptable as the same area was cleared of 'High Density Weed' in December 2019 and the execution of the similar work immediately thereafter in January 2020 and February 2020 indicates that the 'High Density Weed' eradication was improperly executed.

5.10.2 Expenditure on ineligible activities under CAMPA

As per proceedings of the 5th Meeting of the National CAMPA Advisory Council (January 2015), normal forest activity in a State should be undertaken from the State's own plan funds and there should be no attempt to shift the obligation in respect of such items of works to the CAMPA. Expenditure on purchase of vehicle, construction of buildings, *etc*., were not permitted from CAMPA funds. Further as per Para 12(3) of the State CAMPA Guidelines, 2009, NPV shall be used for natural assisted regeneration, forest management, protection, infrastructure development, wildlife protection and management, supply of wood and other forest produce saving devices and other allied activities.

Audit observed from the records of CEO (CAMPA) that funds of ₹ 167.83 crore were sanctioned for various activities, out of which, an amount of ₹ 53.29 crore were released during the period April 2017 to March 2020 from CAMPA account, as detailed in the **Table 5.6** given below:

Table 5.6: Details showing expenditure on ineligible activities under CAMPA

(₹ in crore)

Sl. No.	Activity	Period	Amount sanctioned	Amount disbursed	Disbursed to
1	Construction of Van Bhawan	February 2018	20.88	10.00	DFO, Bhopal
2	'*Anubhuti*' programme for awareness about forests	November 2017	6.08	5.88	71 Divisions
3	Training of the fresh recruit Range Officers and ACFs	2017-18	7.13	5.94	DFO, Bhopal
4	"Agro-forestry to *Krishak Samriddhi* Scheme"	2017-18 to 2018-19	120.30	20.20	Various Divisions
5	Training of forest staff	February 2019	5.00	4.87	Various Divisions
6	For research activity to SFRI	2017-18 to 2019-20	6.47	4.59	SFRI, Jabalpur
7	Infrastructure development	2018-19 to 2019-20	1.97	1.81	ND Veterinary University
Total			**167.83**	**53.29**	

Thus, the Department irregularly incurred expenditure of ₹ 53.29 crore on ineligible activities which could not be linked to any of the activities envisaged for CA and hence could not be carried out from CAMPA funds. This resulted in irregular expenditure and misuse of CAMPA funds amounting to ₹ 53.29 crore.

In reply, the Government stated (October 2022) that the said expenditures have been incurred in accordance with the instructions and guidelines issued in this regard.

The reply is not acceptable because the expenditure incurred on the above activities was against the guidelines as mentioned above.

5.10.3 Irregular expenditure on plantations using CAMPA fund

National CAMPA while approving (June 2019) the Annual Plan of Operation reiterated that if the forest under the management control of Madhya Pradesh State Forest Development Corporation Limited (MPSFDC) has to be regenerated from the NPV component of CAMPA fund, then it should be managed for ecological restoration and not for commercial exploitation of the forest by planting local species. Further, as per proceedings of the 5th Meeting of the National CAMPA Advisory council (January 2015), normal forest activity in a State should be undertaken by the State's own plan funds and there should be no attempt to shift the obligation in respect of such items of works to the CAMPA.

Audit observed during the scrutiny of records of CEO (CAMPA) and Managing Director, MPSFDC that during the period 2017-18 to 2019-20, CEO (CAMPA) provided ₹ 29.58 crore from NPV funds to MPSFDC for pre-planned teak plantations.

Since planting of teak was a commercial activity and such commercial plantations had been raised solely for raising teak, meant to be felled later for auction; use of CAMPA funds for raising teak plantations was irregular.

It was also observed that MPSFDC was assigned (June 2019) management of 1,378.23 Ha forest land under five Divisions[32]. The MPSFDC did not prepare or submit DPRs for the plantations, however, the CEO (CAMPA) transferred (July 2019 to February 2020) ₹ 21.36 crore from NPV funds for raising plantations on these lands. Thus, the transfer of funds by CEO (CAMPA) without ensuring the modalities for raising of plantations was irregular.

32 Khandwa, Indore, Dewas, Vidisha and Raisen.

In reply, the Government stated (October 2022) that the funds were provided to MPSFDC from NPV head for plantation of teak at the RDF[33]Sites for seven years project and after that, the plantation sites will be handed over to Forest Department. MPSFDC is only an agency for plantation work.

The reply confirms the fact that expenditure was irregularly incurred on plantation of teak from CAMPA Fund in violation of several CAMPA guidelines.

5.11 Monitoring and Evaluation

5.11.1 Doubtful expenditure on Compensatory Afforestation

Principle of financial propriety state that every officer is expected to exercise the same vigilance in respect of expenditure incurred from public moneys as a person of ordinary prudence would exercise in respect of expenditure of his own money and the expenditure should not be *prima facie* more than the occasion demands.

During the audit of South and North Sagar Divisions, Audit observed instances of execution of works, which could not be justified by common prudence and also indicated lack of adequate monitoring on the part of departmental officers. Instances have been discussed below:

5.11.1.1 Doubtful expenditure on plantation

The MoEFCC approved (July 2018) diversion of 1,024.44 Ha of forest land in South Sagar Division for construction of Bina Joint Irrigation and Multipurpose Project in favour of the Water Resources Department. The CA on 257.26 Ha degraded forest land was carried out (September 2014) (against this land diversion) with a project cost of ₹ 18.61 crore.

Audit observed in South Sagar Division that DPRs provided for plantation of 1,66,685 saplings on two sites (54-Munderi and 111-Singpur) and the same was shown as planted (in the records). However, during physical verification carried out (December 2020) by Sub-Divisional Officer, only 1,20,321 plants/saplings were found (1,11,298 surviving and 9,023 dead plants). The remaining 46,364 saplings were not available. Further, the Division claimed that 16,668 saplings had been planted as replacement for the dead plants in the subsequent years, which was not correct as replacement was to be provided only against the 9,023 dead saplings. Thus, the expenditure, incurred on plantation of 46,364 saplings and replacement of 7,645 replacement plants/saplings, amounting to ₹ 6.42 lakh, was doubtful.

Further, the area under plantation was to be fenced with perimeter of 9,700 meters. However, during aforesaid physical verification (December 2020), it was observed that measurement of the fence was 7,661 meters. Since the work was shown as ‘executed in full’, the expenditure of ₹ 11.60 lakh incurred on the additional 2,039 meters appears to be doubtful.

The DFO stated (January 2021) that the irregularities related to plantation of trees had been investigated by the APCCF(Protection) and action was being taken against the delinquent officials as per the Report.

Further development in this regard is awaited (January 2023).

5.11.1.2 Double payment for various works

Audit observed in 12 cases of North Sagar Division that an amount of ₹ 5.53 lakh was paid to the labourers for various works such as pit digging, transportation of plants, supply of water for curing of plants and security work. In pit digging work rate for each pit was applied 3.8 man-days instead of three, in transportation of plants rate applied was two man-days in

[33] Rehabilitation of Degraded Forest.

place of 1.8, in supply of water works 9,24,000 litre water was shown transported against the provision of 2,60,000 litre in DPR and in security work 54 man-days were paid for in place of 45 man-days. These resulted in excess payment of ₹ 2.36 lakh.

Audit observed in 10 cases that payment of wages amounting to ₹ 4.85 lakh was made (December 2019 to October 2020) to labourers for pit digging, cement pole fixing and plantation. Detailed scrutiny of the vouchers revealed that 79 labourers were working simultaneously at two different sites. Thus, execution of work and the payments therefore were doubtful and needs examination for fixing responsibility.

Government's reply is awaited (January 2023).

5.11.1.3 Payment without following due processes

As per Madhya Pradesh Store Purchase and Service Procurement Rules, 2015, items valuing ₹ One lakh to ₹ Five lakh are required to be purchased through invitation of limited tender and for items beyond ₹ Five lakh, open tender is required to be invited. Book of Financial Powers, 1995 bestows DFO to sanction procurements up to ₹ Five lakh, CCF up to ₹ 25 lakh and PCCF has full powers.

Audit observed in North Sagar Division in 308 cases that ₹ 1.74 crore was paid for procurement of 29,992.329 Cu. M. of manure and in 584 cases, ₹ 3.53 crore was paid for procurement of 78,119.87 Cu. M. of soil. Examination of the vouchers revealed the following:

- The tenders for these procurements were not invited. Examination of the records pertaining to purchase of soil revealed that the Department had fixed the purchase price of soil at ₹ 200 per Cu. M. The Sub Divisional Officers reported to the DFO (November 2019) that the soil was not available at rate of ₹ 200 per Cu. M. Accordingly, the Division, instead of calling for tenders, increased/revised the purchase price to ₹ 445 per Cu. M. on *ad-hoc* basis. However, purchase of soil was made at different rates averaging to ₹ 451.72 per Cu. M and ranging from ₹ 42.70 per Cu. M to ₹ 1,000 per Cu. M.
- The veracity of quantity procured could not be ascertained as vouchers were not supported by suppliers bills. Further, the Division did not conduct soil test either of the plantation site or the soil procured. Thus, requirement and quality of manure and soil procurement were not ascertained scientifically.
- In four out of the above 584 cases (related to purchase of soil), vehicle numbers shown in vouchers were of two-wheelers. Thus, the supply of 549 Cu. M. soil (involving expenditure of ₹ 2.30 lakh[34]) was doubtful and needs to be further examined by the Department.
- Bills for the work done were not attached with any of the vouchers in support of the amount paid, thus, the veracity of payment to actual supplier could not be ascertained. In 264 cases, an amount of ₹ 1.48 crore was paid to various persons engaged in various works such as supply of soil and manure, watering of plants and transportation of plants by Tractors. The vouchers for payment clearly indicated that the work was accomplished by vendors using their own tractors. Cross verification of vehicle records with the Transport Department revealed that the vehicle numbers (shown as used by vendors) actually belonged to other persons. Thus, the vendors used wrong vehicle details in support of their claim of transportation, thereby indicating that the actual supply was not verified and payment was irregularly released.

In reply, the DFO stated (March 2021) that manure was procured from local market on the basis of tender rates sanctioned by the DFO and soil was procured as per the rates decided on the basis of 'work study'.

[34] 25 Cu M at the rate of ₹ 190 per Cu M and 524 Cu M at the rate of ₹ 430 per Cu M.

The reply is not acceptable as the Division could not provide justifiable reasons for not resorting to open tendering. Further, no such method as 'work study' is stipulated in the rules for deciding the rates. The reply was also silent on other procedural lapses in the purchase process.

5.11.2 Irregularities in fund management and procurement

As per Code 9 and 10 of Volume-I of Madhya Pradesh Finance Code, every Government Servant is expected to exercise the same vigilance in respect of expenditure incurred from public money, as a person of ordinary prudence would exercise in respect of expenditure of his own money. Audit observed various irregularities which are enumerated below:

- Section 196 of Income Tax Act, 1961 provides that no deduction of tax shall be made by any person from any sums payable to Government (*i.e.*, State and Central Government), a Corporation established by or under a Central Act.

  During audit of CEO, CAMPA, Audit observed in seven instances that the banks deducted ₹ 25.57 lakh as Tax Deducted at Source (TDS) from CAMPA Accounts and the same was not claimed by the Department. This resulted in reduction in the CA Fund.

  In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that communication with Bank was under process.

  The Government, however, did not reply (January 2023) for the same.

- As of 21 January 2019, a total of ₹ 4,998.01 crore was transferred to National CAMPA from the State. However, there was a mismatch of ₹ 425.56 crore during reconciliation with records of National CAMPA done by State CAMPA as of December 2018. Lack of timely reconciliation after transfer to the money to National CAMPA represents negligent attitude of State CAMPA management towards fund management.

  The CEO (CAMPA) stated (September 2021) that reconciliation had been carried out in December 2020. Based on the reconciliation, a difference of ₹ 83.38 crore still persisted.

  In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that reconciliation with National CAMPA is going on.

  Further progress in this matter has not been intimated (January 2023).

- In Anuppur and South Sagar Divisions, estimates for construction of 32 anicuts and 13 buildings were prepared during 2017-20 and were executed departmentally. These estimates were prepared as per the Schedule of Rates (SOR) of Public Works Department. However, the deduction of 10 *per cent* was desired as PWD reduced (August 2017) the rates of all items of the SOR by 10 *per cent* due to implementation of Goods and Services Tax (GST). This was not accounted for in the estimates and the works were executed on pre-revised costs. This resulted in extra expenditure amounting to ₹ 13.05 lakh.

  In reply, the DFOs stated (December 2020 and January 2021) that works were executed on the estimates prepared on the basis of Public Works Department, Schedule of Rates and were approved.

  The reply is silent on non-deduction, as enumerated in the PWD's instruction (August 2017).

- As per Madhya Pradesh Store Purchase and Service Procurement Rules, 2015, items valuing ₹ One lakh to ₹ Five lakh are required to be purchased through invitation of limited tender and beyond ₹ Five lakh, open tender is required to be invited. Book of financial powers, 1995 bestows DFO to sanction procurements up to ₹ five lakh, CCF up to ₹ 25 lakh and PCCF has full powers.

We noticed that for the activities under CAMPA, the procurement of items such as cement, grit, sand, computer, etc., amounting from ₹ 11.70 lakh to ₹ 5.31 crore were made in five Divisions. However, the sanction of Competent Authority was not obtained. Besides, tenders were also not called for eight procurement orders of value ranging from ₹ 11.70 lakh to ₹ 2.35 crore. The details are given in **Appendix 5.11**.

Further, the purchase in two cases amounting to ₹ 13.13 lakh and ₹ 38.56 lakh were split in eight and 13 orders, respectively. Thus, sanctions of the Competent Authority were avoided.

The DFOs while accepting the facts (November 2020 to January 2021) stated that action had been initiated to obtain the approval of Competent Authority and procedure would be followed in future.

Further progress in this matter is awaited (January 2023).

5.11.3 Non-maintenance of separate bank accounts for management of CAMPA funds

As per Para 3.5 of Handbook of Guidelines issued (May 2004) by MoEFCC, the Forest Department, or any other technically competent agency which is assigned the job of CA should fully utilize the amount for implementation of the afforestation scheme approved by the GoI and keep separate and meticulous account thereof. The PCCF (CAMPA) directed (June 2017 and March 2018) MPSFDC to open separate sister account for transaction from the CA Fund.

Audit observed during the audit of MPSFDC that Forest Department provided an amount of ₹23.22 crore to MPSFDC from January 2018 to July 2019 from the funds received under CAMPA. However, MPSFDC opened separate account only in August 2019. Thus, during the period from July 2017 to July 2019, these amounts were deposited in the common account of MPSFDC. As the interest on the CAMPA funds were to be used for activities enumerated there under, in absence of separate account, the interest earned could not be quantified and hence utilisation could not be ascertained.

Government’s reply has not been received (January 2023).

5.11.4 Non-maintenance/ updation of records

The maintenance of records in physical or in digital formats is necessary to monitor the compliance of conditions of the sanction of forest land diversion for non-forestry purposes and progress of the mitigation measures undertaken to minimise the harm caused to the environment and ecology of the forest. In this regard, Audit observed the following:

5.11.4.1 Non-submission of Annual Plan of Operation

According to Para 10(3) of CAMPA Guidelines 2009 works would be done as per the approved Annual Plan of Operation and as per Rule 33 of CAMPA Rules, 2018, State Authority shall prepare its Budget for the next financial year based on the APO prepared and approved by the Governing Council for the next financial year.

Audit observed during the scrutiny of records of CEO (CAMPA) that the Annual Plan of Operations was not prepared as envisaged in the CAMPA Rules, 2018. The mechanism to monitor the progress of approved works was also not in place. Thus, the monitoring system of the Governing Council on the works executed was lacking.

In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that APOs were being prepared as per the guidelines.

The relevant documents were, however, not provided to Audit (January 2023).

5.11.4.2 Non-observance of financial procedures

The State CAMPA Guidelines 2009 provides different duties for the Governing Body, the Steering Committee and the State level Executive Committee such as laying down the broad policy framework, monitoring the progress of the utilization of funds and approval of the Annual Reports and supervision of the works being implemented.

Audit observed during scrutiny of records of CEO (CAMPA) that the Code for Maintenance of the Accounts at the implementing agency level was not developed. Financial regulation and procedures were not adopted as per the provisions of the CA Fund Act, 2016.The audited Annual Accounts of the CAMPA had not been submitted to Governing Council since 2016-17[35]. The Annual Statement of 2016-17 was not signed by the CEO (CAMPA).

In reply, the CEO (CAMPA) stated (July 2021) that as per CAF Act, 2016 Annual Reports upto 2019-20 had been prepared in accordance with the directions of GoI, and audited Annual Accounts were being signed by the Competent Authority.

The fact remains that there have been significant delays in preparation of the Code for Maintenance of the Accounts and finalization of audited Annual Accounts. The reasons for the delay had not been recorded. Further, no Annual Statements beyond 2016-17 had been approved as pointed out by Audit.

5.11.4.3 Non-receipt of Self-monitoring Report

According to Guidelines issued (January 2014) by the MoEFCC, every User Agency in whose favour forest land has been diverted for non-forest purpose, shall prepare an annual Self-monitoring Report on compliance with the conditions stipulated in each approval accorded under the FCA, 1980 in January of the next calendar year. The Nodal Officer, FCA, 1980 shall forward the self-compliance report to MoEFCC with comments by July of that year.

Audit observed in 678 cases of diversion of forest land for non-forestry purposes in 13 Divisions that Self-monitoring Reports had not been obtained by the Divisions from User Agencies. The concerned Nodal Officer did not take any action in this regard against the DFOs or the User Agencies for the non-compliance. This indicates inefficient monitoring and indifference towards restoration of damages made to the ecology and environment on account of diversion of forest land.

In Exit Meeting, PCCF (LM and CAMPA) stated (May 2022) that letters have been issued to all concerned.

Further, progress in this matter had not been intimated (January 2023).

5.11.4.4 Non-updation of data on e-Green Watch Portal

In response to Para 17(1) of the Guidelines on the State CAMPA issued (July 2009) by the MoEFCC under the orders (July 2009) of Hon'ble Supreme Court, an integrated online system 'e-Green Watch' was developed which presents the data in real time, which is accessible to all the stakeholders and the public at large. It allows for monitoring, evaluation and social & ecological audits by independent organizations, researchers and the public.

Audit observed in six Divisions that there were 311 cases of forest land diversion, out of which details of 77 cases only were uploaded on the portal. However, full details had not been entered in any of the cases and vital information pertaining to the cases was missing in the e-Green Watch Portal.

Further, seven Divisions received ₹ 172.67 crore from Compensatory Afforestation Funds for various works (425 works) during 2017-20, against which, entries had been uploaded in respect of only 243 works on the e-Green Watch Portal by the Divisions. In these entries, complete

---

[35] The last audited Annual Accounts for the year 2016-17 was prepared and audited by a Chartered Accountant and was submitted in September 2018.

details were not made on the portal. Thus, the Divisions failed to provide data to enable concurrent monitoring and evaluation of the works implemented through CAMPA, which essentially reduced the usefulness of this system. The details are given in **Appendix 5.12**.

In the Exit Meeting, the PCCF (LM and CAMPA) stated (May 2022) that there were technical problems in filling all the required data. The Forest Survey of India, Dehradun and the Indian Institute of Forest Management, Bhopal had also been requested to train staff in this regard. Department further stated that the second version of e-Green Watch Portal was being launched, wherein all the shortcomings would be addressed.

Further, progress in this matter had not been intimated (January 2023).

5.12 Conclusion

The Audit of CAMPA funds revealed the following issues/deficiencies:

- There were cases pertaining to diversion of forest land for non-forestry purposes such as non-adherence of procedures, and non- receipt of land *in lieu of* diverted forest land, short recovery of funds of Net Present Value, Compensatory Afforestation, *etc*.
- There were discrepancies in the activities executed with CAMPA funds resulting in delays/ non-execution of Compensatory Afforestation, preparation of erroneous Detailed Project Reports, erroneous site selections, deficiencies in plantations, failure of plantations, expenditure on unwarranted and ineligible activities, non/short- utilisation of funds, *etc*.
- The overall monitoring and supervision system of the Department was lax, resulting in doubtful expenditure, irregularities in fund management and procurement, *etc*.

Bhopal
The 28 March 2023

(PRIYA PARIKH)
Accountant General
(Audit II)
Madhya Pradesh

Countersigned

New Delhi
The 31 March 2023

(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

APPENDICES

Appendix 1.1

(Referred to in paragraph 1.6.4)

List of recommendation reports issued by Public Accounts Committee in respect of which implementation by Department is pending

Year of Audit Report	Legislative Assembly	Public Account Committee Year	Recommendation Report no.	Para Numbers	Total Para
Finance Department					
2006-07	Fourteenth	2015-16	70	7.2	01
				Total	**01**
Public Works Department					
2003-04	Fourteenth	2015-16	49	4.2.2, 4.2.3, 4.3.2, 4.3.3	04
2004-05	Fourteenth	2015-16	52	3.2, 4.3.2, 4.3.3, 4.5.3	04
2005-06	Fourteenth	2016-17	360	3.7, 4.1.5, 4.2.5, 4.2.7	04
2006-07	Fourteenth	2016-17	366	4.2.8, 4.2.9, 4.5.4	03
2007-08	Fourteenth	2017-18	435	4.5.4	01
2008-09	Fifteenth	2017-18	1	1.2, 2.2.6, 2.2.7	03
2010-11	Fourteenth	2016-17	375	3.4.3	01
2011-12	Fourteenth	2017-18	466	2.1	01
				Total	**21**
Forest Department					
2006-07	Fourteenth	2016-17	365	3.2	01
2010-11	Fourteenth	2015-16	83	9.6	01
				Total	**02**
Public Health Engineering Department					
2005-06	Fourteenth	--	364	4.1.3, 4.2.3, 4.3.4, 4.6.4	04

Year of Audit Report	Legislative Assembly	Public Account Committee Year	Recommendation Report no.	Para Numbers	Total Para
2006-07	Fourteenth	2016-17	367	4.1.1	01
2012-13	Fourteenth	--	454	201	01
				Total	**06**
Urban Development and Housing Department					
2008-09	Fourteenth	2017-18	438	2.2.10	01
2009-10	Fourteenth	2017-18	442	2.1.7	01
2013-14	Fourteenth	--	457	2.1, 3.2.1	02
				Total	**04**
Culture Department					
2011-12	Fourteenth	2017-18	449	3.2 (3.2.6.1, 3.2.7.1, 3.2.7.3, 3.2.7.6, 3.2.7.7, 3.2.7.8, 3.2.8.1, 3.2.8.2, 3.2.8.3, 3.2.8.4, 3.2.8.5, 3.2.8.6, 3.2.8.7, 3.2.8.9, 3.2.8.10, 3.2.8.11, 3.2.8.12)	01
				Total	**01**
				Grand Total	**35**

Appendix 1.2

(Referred to in paragraph 1.6.5)

List of recommendation reports issued by Committee on Public Undertaking (CoPU) in respect of which implementation by Departments is pending

Year of Audit Report	Legislative Assembly	Recommendation Report No.	Para No.	Total Para
Industrial Policy & Investment Promotion Department				
1999-00	Thirteenth	51	13, 17, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 67, 70, 74, 78, 82, 86, 89, 101, 105, 108, 111, 114	25
2003-04	Fourteenth	91	4, 8, 12, 16	4
2004-05	Thirteenth	133	41, 53	2
2004-05	Fourteenth	107	7, 10, 22, 37, 49, 56	6
2004-05	Fourteenth	105	7, 22, 30, 37, 53, 65, 73, 91, 102	9
2004-05	Fourteenth	106	10, 24, 45, 61, 77, 91, 99	7
2005-06	Thirteenth	150	4	1
2005-06	Fourteenth	34	12, 16	2
2007-08	Fourteenth	4	18, 36, 58	3
2010-11	Fourteenth	68	4	1
2010-11	Fourteenth	67	4	1
2012-13	Fourteenth	157	4	1
2012-13	Fourteenth	156	4, 8	2
2013-14	Fifteenth	6	4	1
2013-14	Fifteenth	18	34, 38, 42, 45	4
2015-16	Fifteenth	8	4	1
			Total	**70**

Year of Audit Report	Legislative Assembly	Recommendation Report No.	Para No.	Total Para
Energy Department				
2000-01	Fourteenth	48	62	1
2001-02	Fourteenth	102	13, 25, 39, 47, 51, 55, 59, 70, 74, 86	10
2009-10	Fourteenth	113	4	1
2009-10	Fourteenth	127	4	1
2009-10	Fourteenth	145	4	1
2010-11	Fourteenth	146	12, 32, 40, 44, 48, 52, 56, 60, 84, 88	10
2010-11	Fourteenth	154	16, 32, 40, 47, 51, 58, 62, 66, 77, 89, 105, 109	12
2010-11	Fourteenth	114	4	1
2011-12	Fourteenth	133	4	1
2011-12	Fourteenth	155	14, 18, 25, 29, 36, 40, 44, 48, 59, 69, 76, 83, 96, 122	14
			Total	**52**
Finance Department				
1973-74	Fifth	8	2, 8	2
1986-87	Eleventh	2	31, 35, 55, 66, 79	5
1987-88	Eleventh	109	10, 16, 21	3
2005-06	Fourteenth	110	25, 29, 33, 37, 41, 53, 60, 64, 76, 80, 84, 88, 100,115	14
2010-11	Fourteenth	128	27, 34, 42, 46, 72, 76, 88, 92	8
			Total	**32**
Urban Development and Housing Department				
2010-11	Fourteenth	81	4	1
			Total	**1**

Year of Audit Report	Legislative Assembly	Recommendation Report No.	Para No.	Total Para
Science & Technology Department				
2014-15	Fifteenth	7	4, 8	2
			Total	**2**
			Grand Total	**157**

Appendix 2.1

(Referred to in paragraph 2.5.1)

Shortage of allotment of funds for NDB works

(Amount in ₹)

Sl. No.	Name of Division	Package No.	Contract amount	Vr. NO./Date	RA Bill Amount	Amount withheld for shortage of funds	Percentage of withheld amount	Amount released	Cumulative	Delay in payment (In Months)	Financial charges at the rate of three *per cent* above the Discount rate
1	E.E. PWD (B&R) Dn., Ujjain	1	15,168.37	66/21.01.20	7,76,68,546	4,66,07,900	60	0		6	18,28,451
				18/09.03.20	8,89,08,561	4,95,28,881	52	0		4	12,87,036
				07/28.04.20	7,48,69,757	4,95,69,757	66	0		3	9,62,969
				36/21.05.20	4,16,46,624	1,33,06,057	32	0		2	1,71,774
				122/31.07.20	4,94,81,826	4,08,95,879	82	0		0	0
				28/24.08.20	0		0	3,11,21,764	16,87,86,710	6	12,20,922
				57/07.11.20	6,40,11,258	3,93,66,924	61	0		3	7,64,763
				115/29.01.21	9,21,84,546	35,85,041	47	0		1	23,066
				123/28.03.21	6,23,95,938	2,21,95,938	36	0		0	0
				145/31.03.21	6,26,40,228	0	0	1,29,74,772	22,09,59,841	2	1,67,497
				27/29.04.21	12,58,39,509	9,20,39,504	73	0		0	0
				74/28.05.21	0	0	0	8,59,50,000	22,70,49,345	1	5,53,005
				120/28.06.21	8,61,06,947	0	0	5,82,62,635	16,87,86,710	3	11,31,842
2	E.E. PWD (B&R) Dn., Khargone	6	20,732.32	10/07.03.20	13,68,96,561	9,76,27,843	71	0		0	0
				11/28.04.20	8,24,03,684	0		6,67,70,562	3,08,57,281	0	0
				43/21.05.20	-3,88,98,325	4,97,97,399	0	0		1	3,20,398
				120/31.07.20	5,81,10,098	0		8,93,99,326	-87,44,646	0	0
				22/24.08.20	8,61,50,316	1,30,05,215	15	0		0	0
				83/31.08.20	6,80,06,155	0		1,30,05,215	-87,44,646	1	83,676
				-/28.10.20	5,91,67,459	0		0		0	0
				59/22.11.20	5,32,57,264	3,18,62,662	60	0		6	12,49,988
				106/23.01.21	4,76,07,324	24,14,253	5	0		3	46,901
				/24;02.21	5,68,52,643	1,82,01,707	32	0		1	1,17,110
				/10.05.21	17,73,218	0		1,01,12,000	3,36,21,976	0	0
				/01/06/21	0	0		2,28,99,536	1,07,22,440	0	0
				121/23.06.21	0	0		1,94,67,086	-87,44,646	3	3,78,178
3	E.E. PWD (B&R) Dn., Gwalior	9	16,053.99	62/21-01-2020	10,00,08,415	6,00,05,415	60	0		2	7,74,637

Sl. No.	Name of Division	Package No.	Contract amount	Vr. NO./Date	RA Bill Amount	Amount withheld for shortage of funds	Percentage of withheld amount	Amount released	Cumulative	Delay in payment (In Months)	Financial charges at the rate of three *per cent* above the Discount rate
				112/20.03.20	1,87,90,654	36,70,654	19.53	0		0	0
				38/30.04.20	0	0		1,53,00,000	4,83,76,069	2	1,97,515
				40/21.05.20	7,02,00,902	5,11,00,902	72.79				0
				115/31.07.20	10,90,51,205	0	0	71,02,739	9,23,74,232	0	0
				27/24.08.20	0	0		7,02,96,791	2,20,77,441	0	0
				84/31.08.20	8,30,23,745	0	0	2,20,77,441	0	0	0
				17/16.09.20	3,56,58,935	0	0	0			0
				54/29.10.20	7,15,61,495	3,57,80,747	50				0
				55/07.11.20	18,25,74,281	9,85,07,594	53.95				0
				121/29.01.21	18,01,25,528	0	0	2,73,37,875	10,69,50,466	3	5,31,081
				128/28.03.21	18,12,73,626	6,77,47,226	37.37			1	4,35,888
				1/04.05.21	5,80,60,572	0	0	1,84,24,942	15,62,72,750	0	0
				81/28.05.21	13,34,92,240	0	0	3,86,09,760	11,76,62,990	0	0
				130/29.06.21	0	0		11,76,62,991	-1	3	0
4	E.E. PWD (B&R) Dn., Vidisha	12	13,924.74	63/21.01.20	6,11,38,121	3,66,80,495	60			6	14,38,994
				80/24.01.20	11,32,20,660	6,79,32,660	60			6	26,65,031
				16/9.03.20	5,58,91,022	1,06,44,622	19			1	68,488
				10/28.04.20	5,42,66,400	2,92,66,400	54			0	0
				50/21.05.20	0	0		2,24,00,000	12,21,24,177	1	1,44,122
				124/31.07.20	8,48,71,976	0		3,93,28,024	8,27,96,153	0	0
				24/24.08.20	0	0		6,30,07,872	10,46,60,257	7	28,93,128
				75/11.11.20	5,25,69,622	2,66,17,336	51	0		4	6,91,667
				123/29.01.21	11,83,85,392	90,76,552	8	0		2	1,17,173
				126/28.03.21	18,35,35,152	11,80,14,062	64	0		0	0
				29.04.21	0	0		3,34,20,000	22,49,48,207	0	0
				83/28.05.21	0	0		8,34,84,000	14,14,64,207	5	27,20,476
5	E.E. PWD (B&R) Dn., Dindori	17	15,360.81	21.01.20	10,94,87,266	6,73,48,626	61.51	0		3	13,08,351
				13.03.20	12,83,21,386	10,45,84,776	81.50	0		1	6,72,902
				28.04.20	9,99,26,770	3,90,65,340	39.09	0		0	0
				21.05.20	0	0		3,92,36,861	17,17,61,881	1	2,52,451
				31.07.20	8,93,10,859			9,50,05,453	7,67,56,428	0	0
				24.08.20	0	0		6,23,94,577	1,43,61,851	0	0

Sl. No.	Name of Division	Package No.	Contract amount	Vr. NO./Date	RA Bill Amount	Amount withheld for shortage of funds	Percentage of withheld amount	Amount released	Cumulative	Delay in payment (In Months)	Financial charges at the rate of three *per cent* above the Discount rate
				16.09.20	5,62,06,299	0		1,43,61,851	*0*	*0*	0
				09.11.20	16,23,87,411	9,48,88,969	58.43	0		1	6,10,518
				28.01.21	14,19,44,469	0		3,43,80,528	6,05,08,441	3	6,67,895
				30.01.21	0	98,97,246	--	0		2	1,27,768
				28.03.21	14,44,51,876	10,08,87,773	69.84	0		0	0
				29.04.21	0	0		3,96,04,032	13,16,89,428	0	0
				27.05.21	8,84,35,786	3,14,36,318	35.55	0		0	0
				28.05.21	0	0		7,48,20,000	8,83,05,746	0	0
				29.06.21	6,57,67,568	0		8,83,05,746	0	0	0
6	E.E. PWD (B&R) Dn., Chhindwara	18	19,688.69	64/21.01.20	12,27,88,318	7,35,38,630	60	0		2	9,49,344
				12/09.03.20	12,08,39,560	8,12,28,821	67	0		0	0
				34/30.04.20	1,56,80,261	0		4,05,00,000	11,42,67,451	2	5,22,833
				56/21.05.20	15,26,79,589	12,08,94,890	79	0		1	7,77,841
				113/31.07.20	18,80,23,407	0		10,62,00,493	12,89,61,848	0	0
				19/24.08.20	-4,79,76,962	0		9,84,42,521	3,05,19,327	0	0
				82/31.08.20	2,52,462	0		3,05,19,327	0	0	0
				20/19.09.20	2,25,93,160	0		0		0	0
				-/19.10.20	12,36,33,593	6,59,34,513	53	0		6	25,86,643
				122/19.01.21	15,92,83,426	64,04,823	4	0		3	1,24,424
				132/28.03.21	12,04,01,537	6,55,63,573	54	0		1	4,21,838
				08/05.05.21	6,59,67,127	0		6,56,44,751	7,22,58,158	0	0
				61/27.05.21	2,88,28,079	38,03,341	14	0		0	0
				72/28.05.21	82,87,679	0		3,46,12,000	4,14,49,499	0	0
				128/29.06.21	6,60,19,226	0		4,14,49,499	0	0	0
7	E.E. PWD (B&R) Dn., Umaria	19	5,630.57	71/21.01.20	3,40,01,877	1,96,24,339	57.72	0		2	2,53,340
				13/09.03.20	4,35,05,585	2,54,26,892	58.45	0		0	0
				35/30.04.20	0	0	0	1,18,00,000	3,32,51,231	0	0
				41/21.05.20	3,12,65,677	2,09,20,465	66.91	0		1	1,34,603
				108/31.07.20	4,09,31,961	0	0	69,91,091	4,71,80,605	0	0
				23/20.08.20	0	0	0	3,59,04,440	1,12,76,165	0	0
				45/30.09.20	98,60,890	0	0	1,12,76,165	0	0	
				116/29.01.21	5,14,65,636	1,46,19,647	28.41	0		3	2,84,009
				131/28.03.21	13,82,49,612	7,27,41,818	52.62	0		1	4,68,023

Sl. No.	Name of Division	Package No.	Contract amount	Vr. NO./Date	RA Bill Amount	Amount withheld for shortage of funds	Percentage of withheld amount	Amount released	Cumulative	Delay in payment (In Months)	Financial charges at the rate of three *per cent* above the Discount rate
				26/29.04.21	5,20,98,771	5,20,98,771[1]	100	0		0	0
				62/27.05.21	1,38,38,347	0	0	2,80,89,653	12,33,47,816	0	0
				70/28.05.21	0	0	0	5,65,75,000	6,67,72,816	0	0
				117/28.06.21	4,02,93,627	0	0	6,67,72,816	0	0	0
	Total		**1,06,559.49**		**6,07,38,32,215**	**2,25,59,59,196**		**2,05,13,02,135**			**3,31,48,559**

[1] The amount actually withheld was ₹ 6,40,76,004 of which ₹ 1,19,77,233 pertained to previous bills.

Appendix 2.2

(Referred to in paragraph 2.6.2)

Irregular provisioning and execution of backfilling

Sl. No.	Name of Division	Package no.	Executed Quantity	Rate	Amount (₹ in lakh)
1	E.E. PWD (B&R) Dn., Umaria	19	6,081.99	792	48.17
2	E.E. PWD (B&R) Dn., Dindori	17	21,197.14	400	84.79
3	E.E. PWD (B&R) Dn., Khargone	6	18,121.56	700	126.85
4	E.E. PWD (B&R) Dn., Gwalior	9	6,947.77	930	64.61
5	E.E. PWD (B&R) Dn., Chhindwara	18	6,588.01	510	33.60
	Total		**58,936.47**		**358.02**

Appendix 2.3

(Referred to in paragraph 2.7.2)

Below specification work of Dense Bituminous Macadam

(₹ in lakh)

Sl. No.	Name of Division	Name of Roads	Quantity of DBM executed	Date of DBM	DBM covered with BC	Date of BC	Delay	Uncovered DBM	Delay	Rate of DBM	Total DBM Cost
1	E.E. PWD (B&R) Dn., Vidisha	Devpur Muglasary road	2,754.40	2.12.19 to 19.1.20	2,754.40	28.5.20 to 8.6.20	4 to 5 months	Nil	--	7,200	198.32
		Udaipur to Bina river road	9,269.09	9.12.19 to 21.1.21	1,126.02	12.2.21 to 5.3.21	2 to 3 month	8,143.07	BC not laid upto March 21	7,200	667.37
		Kulhar via Bhaak Bamora Mandi	4,469.16	07.12.19 to 27.01.21	1,047.75	13.01.21 to 18.03.21	12 months	3,421.41	BC not laid upto March 21	7,200	321.78
		Berkhedi shayar-Bamora Parasi - Khamkheda MDR works	3,708.79	25.11.20 to 11.12.20	Nil	BC not laid upto March 21	6 months	3,708.79	BC not laid upto March 21	7,200	267.03
2	E.E. PWD (B&R) Dn., Umaria	KarkeliGhulghuliRahthaKathautiya road	8,688.50	27.2.20 to 17.3.20	2,210.10	07.06.21 to 16.06.21	3 months	6,478.40	BC not laid upto June21	5,700	495.24
3	E.E. PWD (B&R) Dn., Dindori	SakkaAmarpurSamnapur road	6,760.15	8.9.19 to 1.11.19	5,279.00	17.02.21 to 23.02.21	15 to 17 months	1,481.15	BC not laid upto June 21.	7,000	473.21
		Seoni-Bonder-Kosamdih road	3,586.60	13.06.19 to 28.08.19	1,061.00	01.03.20 to 04.03.20	6 to 8 months	2,525.20	BC not laid upto June 21.	7,000	251.06
		Seoni-Sangam-Gorakhpur road	8,990.50	13.09.19 to 30.12.19	3,813.60	13.09.20 to 03.03.21	12 to 14 months	5,176.90	BC not laid upto June 21.	7,000	629.34
		Salwa-Bamhani road	697.78	19.12.20 to 25.12.20	676.50	18.05.21 to 20.05.21	4 to 5 months	21.28	BC not laid upto June 21.	7,000	48.84
		Barela-Niwas road	4,321.63	13.02.20 to 30.04.20	227.50	01.03.20 to 04.03.21	18 days to 11 months	4,094.16	BC not laid upto June 21.	7,000	302.51

Sl. No.	Name of Division	Name of Roads	Quantity of DBM executed	Date of DBM	DBM covered with BC	Date of BC	Delay	Uncovered DBM	Delay	Rate of DBM	Total DBM Cost
		Ghughri-Dhanitola road	708.90	02.12.20 to 22.05.21	0.00	BC not laid on entire DBM upto June 21	-----	708.90	BC not laid upto June 21	7,000	49.62
4	E.E. PWD (B&R) Dn., Gwalior	Maharajpur – Shanichara Road	4,326.40	17.06.20 to 01.03.21	4,326.40	04.03.21 to 23.03.21	15 days to 13 months	0.00	--	7,600	328.81
		Nayagaon – Chinor Road	5,469.75	09.10.20 to 16.01.21	5,469.75	04.03.21 to 08.05.21	4 to 5 months	0.00	--	7,600	415.70
		Gijorra – Jigniya Road	7,656.00	17.09.20 to 29.04.21	7,095.00	03.03.21 to 29.04.21	1 day to 5 months	561.00	BC not laid upto July 21	7,600	581.86
		Panihar – Pagara Road	2,788.50	01.05.21 to 12.05.21	0.00	BC not laid upto July 21	--	2,788.50	BC not laid upto July 21	7,600	211.93
		Karriya – Aron Road	2,274.25	08.05.20 to 12.05.21	0.00	BC not laid upto July 21	----	2,274.25	BC not laid upto July 21	7,600	172.84
		Total	**76,470.40**		**35,087.02**						**5,415.46**

Appendix 2.4

(Referred to in paragraph 2.7.3)

Short deduction of royalty

(₹ in lakh)

Sl.No.	Name of Division &Package No.	Package no.	Amount to be deducted	Amount deducted	Short deduction	Amount of Royalty kept into the Civil Deposit
1	E.E. PWD (B&R) Dn., Vidisha	12	382.07	203.58	178.49	203.58
2	E.E. PWD (B&R) Dn., Umaria	19	189.95	40.00	149.95	40.00
3	E.E. PWD (B&R) Dn., Ujjain	1	450.70	19.30	431.40	19.30
4	E.E. PWD (B&R) Dn., Dindori	17	549.41	124.10	425.31	124.10
5	E.E. PWD (B&R) Dn., Gwalior	9	529.00	250.00	279.00	250.00
6	E.E. PWD (B&R) Dn., Khargone	6	663.62	636.01	27.61	86.26
7	E.E. PWD (B&R) Dn., Chhindwara	18	408.84	248.85	159.99	159.99
	Total		**3173.59**	**1521.84**	**1651.75**	**883.23**

Appendix 3.1

(Referred to in paragraph 3.3)

Details of Schemes completed during 2018-19 to 2020-21

Sl. No.	Name of Scheme	Contract Value (₹ in crore)	Funding	Date of Completion[2]	Selected in Sample
1	Mohkhed	54.89	State Fund	31.05.2018	Yes
2	Udgawan	90.35	Bundelkhand Fund	31.05.2018	Yes
3	Niwadi	79.92	Bundelkhand Fund	30.03.2021	Yes
4	Narhela	77.66	National Bank for Agriculture and Rural Development	31.10.2019	Yes
5	Kirgi	60.34	Mining Development Fund	07.12.2018	Yes
6	Bhatera	52.97	National Bank for Agriculture and Rural Development	15.10.2018	Yes
7	Manpur	49.08	National Bank for Agriculture and Rural Development	31.03.2021	Yes
8	Devsarra	40.57	National Bank for Agriculture and Rural Development	15.10.2018	Yes
9	Byarma	36.70	Bundelkhand Fund	30.11.2020	Yes
10	Dhuti	33.70	National Bank for Agriculture and Rural Development	15.10.2018	Yes
11	Piparjhari	20.51	National Bank for Agriculture and Rural Development	15.10.2018	Yes
12	Araniya Bahadur	14.98	National Bank for Agriculture and Rural Development	31.05.2018	Yes

[2] As per information furnished by the Nigam.

Appendix 3.2

(Referred to in paragraph 3.3)

Details of ongoing Schemes (having more than 60 *per cent* financial progress) as on 31 March 2021

Sl. No.	Name of Scheme	Contract Value (₹ in crore)	Funding	Scheduled Date of Completion	Selected in Sample
List of six Schemes selected in Sample for detailed scrutiny in Audit					
1	Satna-Bansagar	1,135.96	New Development Bank	10.01.21	Yes
2	NiwadiPrathvipur-I	173.41	Mining Development	26.11.19	Yes
3	Bankpura	122.86	National Bank for Agriculture and Rural Development	17.04.19	Yes
4	Siddghat	89.27	National Bank for Agriculture and Rural Development	27.03.19	Yes
5	Majholi	69.93	National Bank for Agriculture and Rural Development	19.12.15	Yes
6	Basai	49.44	Mining Development	19.09.20	Yes
List of 24 other Schemes not selected in Sample					
7	Kundaliya	533.41	New Development Bank	01.02.21	No
8	Byarma	280.87	Mining Development	01.01.21	No
9	Buxwaha	250.00	National Bank for Agriculture and Rural Development	16.05.20	No
10	Mohanpura	248.20	New Development Bank	01.08.20	No
11	Indwar-I	221.72	National Bank for Agriculture and Rural Development	16.09.20	No
12	Bandol	208.87	Mining Development	28.01.20	No
13	Majhgain	195.73	District Mining Fund	09.04.19	No
14	BanaSujara	187.00	Mining Development	17.04.19	No
15	Pawai Dam	177.35	New Development Bank	16.05.20	No
16	Sagad	126.79	Mining Development	09.04.19	No
17	Kandaila	123.72	New Development Bank	03.01.21	No
18	Gorakhpura	119.77	National Bank for Agriculture and Rural Development	16.05.20	No
19	Karanpura-I	116.38	Mining Development	06.10.20	No
20	Bansagar	95.00	Mining Development	30.07.20	No
21	Damhedi-I	92.88	Mining Development	30.07.20	No
22	Pahadgarh	74.90	New Development Bank	10.11.19	No
23	Beohari	68.08	District Mining Fund	30.01.20	No
24	Bandonkala	65.43	National Bank for Agriculture and Rural Development	07.08.18	No
25	Gohparu	55.15	District Mining Fund	30.01.20	No
26	Baagh	46.23	National Bank for Agriculture and Rural Development	17.10.18	No
27	Roshni-I	39.40	National Bank for Agriculture and Rural Development	13.06.19	No
28	Datehara	32.24	National Bank for Agriculture and Rural Development	13.09.19	No
29	Gunawad	25.94	State Fund	26.09.20	No
30	Nagda	21.85	State Fund	19.09.18	No

Appendix 3.3

(Referred to in paragraph 3.4.1)

Details of Block wise villages earmarked by the Divisions for water supply Scheme

Sl. No.	Division	Block	No. of villages marked
1	Bhopal	02	17
2	Betul	10	84
3	Barwani	07	52
4	Damoh	04	25
5	Mandla	09	73
6	Morena	07	56
7	Ratlam	06	51
8	Raisen	07	60
9	Rajgarh	06	48
10	Satna	03	25
	Total	**61**	**491**

Appendix 3.4

(Referred to in paragraph 3.4.1)

Details of infructuous expenditure on drilling and preparation of Detailed Project Report (DPR) for pipe water supply

Sl. No.	Division	No. of selected villages	No. of DPRs Prepared	No. of DPR administratively approved	No. of works executed	No. of DPRs not approved	Expenditure on drilling for tube well and preparation of DPRs not approved (₹ in lakh)
1	Bhopal	17	17	15	15	2	5.74
2	Rajgarh	48	40	33	27	13	23.97
3	Raisen	60	34	34	33	1	05.76
4	Damoh	25	25	18	18	7	22.77
5	Betul	84	55	43	43	12	54.03
6	Ratlam	51	51	25	25	26	202.35
7	Mandla	73	37	33	33	4	06.00
8	Badwani	52	46	28	28	18	107.00
9	Morena	56	56	32	32	24	68.59
10	Satna	25	12	12	12	0	0.00
	Total	**491**	**373**	**273**	**266**	**107**	**496.21**

Appendix 3.5

(Referred to in paragraph 3.4.4.1)

Details of shortfall in Daily Reservoir Water Level Data (Live capacity)

Sl. No.	Name of the Scheme	Source of Water	Water Requirement immediately after Completion (Million Cubic Metre)	No. of days when there is nil water Availability in Source[3] (days)	No. of days when water availability is below the water requirement[3] (days)	Range of Shortage of Water (Million Cubic Metre)
1	Arania Bahadur	Arania Bahadurpur Dam	1.02	171	175	0.17 to 1.02
2	Dhuti	Wainganga	3.19[4] (combined)	73	268	0.08 to 3.19
3	Piparjhari					
4	Devsarra					
5	Bhatera					
6	Basai-1	Budhni River	1.70	171	186	0.18 to 1.70
7	Kirgi	Johila Dam	1.60	NIL	NIL	NIL
8	Mohkhed	Saroth Dam	1.30	72	111	0.03 to 1.30
9	Narhela	Pagara Dam	2.51	NIL	NIL	NIL
10	Satna-Bansagar	Ban Sagar Dam	43.25	170	297	0.45 to 43.25

3 As per Daily Water Reservoir Data from 08.05.2018 to 28.09.2021 available at web portal of Madhya Pradesh Water Resource Department.

4 Bhatera-1.34 Million Cubic Metre, Devsarra-0.68 Million Cubic Metre, Dhuti-0.68 Million Cubic Metre and Piparjhari-0.49 Million Cubic Metre.

Appendix 3.6

(Referred to in paragraph 3.4.5)

Details of variation in awarded and executed quantity of pipeline

(Amount in ₹)

Component of Manpur Scheme	Dia of Pipe (mm)	Quantity as per Contract	Quantity Executed	Rate of Pipe	Additional Amount (₹)
1	2	3	4	5	6=(4-3)×5
Clear Water Pumping Main	100	150	1,500.00	1,188.73	16,04,786
	150	-	2,823.50	1,720.49	48,57,804
	200	150	1,984.00	2,279.92	41,81,373
	250	-	1,069.00	3,025.03	32,33,757
	300	4,950	4,630.00	3,805.82	-12,17,862
	350	-	4,055.00	5,017.29	2,03,45,111
	400	-	3,452.00	5,671.43	1,95,77,776
Sub-Total		**5,250**	**19,513.50**		**5,25,82,745**
Water Distribution Network	90	38,610	87,696.50	336.72	1,65,28,406
	110	8,410	15,035.00	436.32	28,90,620
	160	7,910	15,875.00	852.48	67,90,003
	200	3,090	3,148.00	1,239.75	71,906
	250	-	809.00	1,833.37	14,83,196
	300	-	204.00	2,526.41	5,15,388
Sub-Total		**58,020**	**1,22,767.50**		**2,82,79,519**
Grand Total		**63,270**	**1,42,281.00**		**8,08,62,264**

Appendix 3.7

(Referred to in paragraph 3.5.1)

Details of Blocking up of Fund by the Nigam

(₹ in crore)

Year	Particular	National Bank for Agriculture and Rural Development	New Development Bank	Mining Development Fund	District Mining Fund	Bundelkhand Fund	State Fund	Jal Jeevan Mission	Total
2018-19	Opening Balance	466.09	0	167.81	0	7.31	0.31	0	641.52
	Received during the year	218.07	430.99	351.63	14.88	29.99	6.09	0	1,051.65
	Expenditure during the year	399.74	576.46	393.24	18.53	22.86	8.59	0	1,419.42
	Closing Balance	**284.42**	**-145.47**	**126.20**	**-3.65**	**14.44**	**-2.19**	**0**	**273.75**
2019-20	Opening Balance	284.42	-145.47	126.20	-3.65	14.44	-2.19	0	273.75
	Received during the year	323.81	573.16	484.86	54.99	0	4.54	0	1,441.36
	Expenditure during the year	342.03	836.92	427.56	57.10	8.43	6.04	0	1,678.08
	Closing Balance	**266.20**	**-409.23**	**183.50**	**-5.76**	**6.01**	**-3.69**	**0**	**37.03**
2020-21	Opening Balance	266.20	-409.23	183.50	-5.76	6.01	-3.69	0	37.03
	Received during the year	417.19	1,162.64	204.37	34.65	0	0	720.00	2,538.85
	Expenditure during the year	309.82	737.87	166.09	31.38	5.43	1.20	311.39	1,563.18
	Closing Balance	**373.57**	**15.54**	**221.78**	**-2.49**	**0.58**	**-4.89**	**408.61**	**1,012.70**

Appendix 3.8

(Referred to in paragraph 3.6.1)

Non-coverage of targeted household connection under piped water supply scheme

(In number)

Sl. No.	Division	Completed works	Household connection as per agreement	Household connections actually provided	Shortfall	Percentage of shortfall
1	2	3	4	5	6=4-5	7=6×100/4
1	Rajgarh	07	3,127	2,706	421	13
2	Raisen	12	4,472	3,174	1,298	29
3	Betul	09	4,486	3,244	1,242	28
4	Mandla	12	4,186	2,715	1,471	35
5	Satna	03	2,674	2,141	533	20
6	Damoh	12	4,440	3,520	920	21
7	Ratlam	10	6,439	5,318	1,121	17
8	Barwani	09	4,491	3,056	1,435	32
9	Bhopal	03	1,380	1,013	367	27
	Total	**77**	**35,695**	**26,887**	**8,808**	

Appendix 3.9

(Referred to in paragraph 3.6.2)

Details of payment of Excise Duty to the Contractors despite exemption

(₹ in crore)

Sl. No.	Name of Schemes	Payment made up to 30.06.2017	60 *per cent* of the payment amount (Being material cost)	Payment of exempted Excise Duty at the rate of 12.50 *per cent* on 60 *per cent* to the Contractors
1	2	3	4=3×60 *per cent*	5=4×12.50 *per cent*
1	Arania Bahadur	10.44	6.26	0.78
2	Bagod Nandla Pipaliya	64.03	38.42	4.80
3	Devsarra, Bhatera, Dhuti, Piparjhari	104.78	62.87	7.86
4	Gangawabdi	36.01	21.61	2.70
5	Jhurki	9.58	5.75	0.72
6	Majholi	30.02	18.01	2.25
7	Manpur	29.66	17.80	2.22
8	Mardanpur	215.57	129.34	16.17
9	Mohkhed	42.01	25.21	3.15
10	Narhela	36.80	22.08	2.76
11	Punjapura	21.53	12.92	1.61
12	Roshni	19.95	11.97	1.50
13	Talunkhurd	54.32	32.59	4.07
14	Udaipura	150.12	90.07	11.26
15	Byarma	28.63	17.18	2.15
16	Niwadi	50.52	30.31	3.79
17	Udgawan	68.17	40.90	5.11
Total		**975.14**	**583.29**	**72.90**

Appendix 3.10

(Referred to in paragraph 3.6.3.1)

Details of Non-deduction of Liquidated Damages from the Contractors

Sl. No.	Scheme	Contractor	Date Letter of Acceptance	Contract Value (₹ in crore)	Scheduled Completion Date	Actual Completion Date	Delay (Days)	Reason for delay	Liquidated Damages (₹ in crore)
A. Details of Schemes in which delay was attributable to the Contractor									
1	Mohkhed	M/s Unipro Techno Infrastructure Pvt. Ltd.	27.06.15	54.89	26.02.17	06.03.18	373	Non-providing electricity connection for the Scheme by the Madhya Pradesh Poorva Kshetra Vidyut Vitaran Nigam Limited. However, Audit noted that the electric line and sub-stations were constructed (30/11/2017) by the Contractor after the load was sanctioned by Madhya Pradesh Poorva Kshetra Vidyut Vitaran Nigam Limited with a delay of 277 days.	5.49
2	Udgawan	M/s Kalyan Toll Infrastructure Ltd and M/s Asiatic Traders, Indore	20.10.14	90.35	19.10.16	31.01.18	469	The Nigam had accorded five time-extensions to the Contractor. Delay of only 21 days was attributed to the Contractor as the delay was in obtaining permissions from various Government Authorities for laying and crossing of pipelines. Audit noted that the works of 'Intake Well' and 'Gravity Feeder Main' were completed with a delay of 238 days and 419 days respectively, which were attributable to the Contractor.	5.97[5]
3	Byarma	M/s Tejas Constructions & Infrastructure Pvt Ltd., Pune	07.11.14	36.70	06.11.16	10.01.19	795	Reasons for delay quoted by the Contractor were change in the location of Water Treatment Plant and Elevated Surface Reservoir, change in capacity of Water Treatment Plant. The Nigam had accorded four time-extensions to the Contractor on the advice of Consultant. As per Clause 10 and 18 of 'Notice Inviting Tender, the Contractor was fully responsible for obtaining requisite permission and inspecting the site of works. Further, Scheme Implementation Unit, Sagar attributed the delay to the Contractor only.	3.67
4	Dhuti	M/s Bengal Tools Ltd	26.05.15	33.70	25.01.17	15.07.18	536	Delay was on the part of contactor as the Contractor after lapse of almost 12 months from the date of agreement requested (04.05.2016) for change of location for Treatment Plant but carried out Treatment Plant works in advance stage without getting final	3.37

[5] (419 days – 21 days) × Liquidated Damages at the rate of ₹ 1,50,000 per day = ₹ 5.97 crore.

Sl. No.	Scheme	Contractor	Date Letter of Acceptance	Contract Value (₹ in crore)	Scheduled Completion Date	Actual Completion Date	Delay (Days)	Reason for delay	Liquidated Damages (₹ in crore)
								approval from the competent authority for the changed location. This delayed the Scheme, which was completed on 23.01.2018 with total delay of 516 days.	
5	Bhatera	M/s Tejas Constructions and Infrastructure Pvt Ltd., Pune	26.05.15	52.97	25.01.17	06.07.18	527	Inspite of delay in completion of various components of the works by the Contractor, no delay was attributed on the part of the Contractor by the company and Liquidated Damages was not deducted as required under the condition of the Contract.	5.30
6	Devsarra	M/s JITF Water Infrastructure Ltd., New Delhi	26.05.15	40.47	25.01.17	23.10.18	636		4.06
7	Piparjhari	M/s Bengal Tools Ltd	26.05.15	20.51	25.01.17	30.06.18	521		2.05
8	Majholi	M/s JITF Water Infrastructure Limited	20.12.13	69.93	19.12.15	Not Completed. Delay calculated upto 31.08.21	2082	The delay was on account of slow and poor progress of the Contractor. Inspite of inordinate delay in completion of Scheme, the Nigam has not levied any Liquidated Damages on the Contractor instead 14 time extensions were accorded to him.	6.99
Sub-Total (A)									**36.90**
B. Details of Schemes in which time extensions were granted without deduction of Liquidated Damages									
9	Niwari	M/s JITF Water Infrastructure Limited	14.08.14	79.92	13.08.16	01.04.20	1327	Seven time extensions were granted by the Nigam to the Contractor without assessing the reasons and conducting delay analysis.	7.99
10	Manpur	M/s JITF water Infrastructure, Delhi	14.08.14	49.08	13.08.16	31.12.20	1602	14 time extensions have been given by the Nigam on the basis of recommendations of the Consultant.	4.91
11	Narhela	M/s JITF Water Infrastructure Ltd., New Delhi	14.08.14	77.66	13.08.16	24.11.19	1198	There was minimum delay of 495 days in completion of the Scheme, which was attributable to the Contractor, as besides Water Treatment Plant and Intake Well, the Contractor delayed the other works also viz. Raw/ Clear Water Pumping Main, Overhead Tanks,	7.43[6]

[6] 495 days × Liquidated Damages at the rate of ₹ 1,50,000 per day = ₹ 7.43 crore.

Sl. No.	Scheme	Contractor	Date Letter of Acceptance	Contract Value (₹ in crore)	Scheduled Completion Date	Actual Completion Date	Delay (Days)	Reason for delay	Liquidated Damages (₹ in crore)
								Distribution System, etc. The Nigam has given seven extensions to the Contractor on the condition of levy of liquidated damages, but no penalty was levied. Moreover, delay analysis submitted by the Contractor on August 2020 with a delay of approximately one year from the date of completion of the Scheme, was still under consideration at the Nigam (October 2021).	
12	Bankpura	M/s Indian Hume Pipe Co. Ltd., Mumbai	18.04.17	122.86	17.04.19	Not Completed. Delay calculated upto 31.08.21	867	The Nigam has incurred expenditure of ₹ 109.73 crore on the Scheme, however, the Bankpura Scheme has not been completed so far (August 2021). Main reason of slow progress of work, as noted in Audit, was non-deployment of sufficient manpower by the Contractor at site. On the advice of the Consultant, the Nigam had accorded five time-extensions to the Contractor with the condition to levy liquidated damages as per contract but Nigam has not levied the same on the Contractor.	12.29
13	Niwari Prithvipura-1	M/s Larsen and Toubro Limited, Chennai	27.11.17	173.41	26.11.19	Not Completed. Delay calculated upto 31.08.21	644	Inspite of delay in completion of various components of the works by the Contractor, no delay was attributed on the part of the Contractor by the Nigam and Liquidated Damages was not deducted as required under the condition of the Contract.	17.34
								Sub-Total (B)	**49.96**
								Grand Total	**86.86**

Appendix 3.11

(Referred to in paragraph 3.6.3.2)

Statement showing delay in completion of work and non/short levy of penalty

(Works in No., Delay in days and ₹ in lakh)

Sl. No.	Division	work	Timely completed works	Delayed works	Delay for completed works	Delay for ongoing works as of November 2021	Non levy of penalty for delay	Penalty less imposed
1	Bhopal	15	01	14	140, 151, 265, 346, 508 (05 works)	595, 595, 595, 595, 595, 595, 595, 1019, 1031 (09 works)	116.71 (in 14 works)	00
2	Rajgarh	15	5	10	48, 50, 84, 101, 236, 240, 241, 361, 674, 678 (10 works)	0	75.77 (in 10 works)	00
3	Raisen	15	0	15	15, 16, 64, 75, 79, 215, 287, 319, 353, 396, 498, 606, 651, 678, 898 (15 works)	0	82.68 (in 11 works)	8.80 (in 04 works)
4	Betul	15	1	14	30, 31, 63, 75, 84, 101, 121, 135, 161, 180, 303, 338, 341 (14 works)	0	98.74 (in 13 works)	1.51 (in 01 works)
5	Mandla	15	0	15	351, 564, 411, 169, 567, 618, 370, 367, 383, 289, 389, 441, 513, 250, 73 (15 works)	0	130.97 (in 15 works)	00
6	Damoh	15	0	15	224, 246, 264, 288, 296,308, 318, 323, 332, 341, 345, 355, 366, 386, 386 (15 works)		103.35 (in 10 works)	29.55 (in 05 works)
7	Satna	12	0	12	180, 181, 496, 541, 764 (05 works)	847, 888, 960, 970, 1131, 1046, 1046 (07 works)	136.63 (in 12 works)	00
8	Ratlam	15	0	15	18, 54, 85, 86, 92, 108, 120, 123, 143, 144, 151, 175, 212, 273, 304 (15 works)	0	104.64 (in 15 works)	00
9	Barwani	15	1	14	35, 107, 126, 126, 143, 181, 183, 207, 313, 329, 351, 448, 448, 603 (14 works)	0	185.71 (in 14 works)	00
10	Morena	15	0	15	0	594, 594, 594, 594, 594, 811, 823, 851, 853, 894, 960,960, 960, 960, 960 (15 works)	305.55 (in 15 works)	00
	Total	**147**	**8**	**139**			**1,340.75 (in 129 works)**	**39.86 (in 10 works)**

Median period of delay for completed works:

Delay in number of days	15, 16, 18, 30, 31, 35, 48, 50, 54, 63, 64, 73, 75, 75, 79, 84, 84, 85, 86, 92, 101, 101, 107, 108, 120, 121, 123, 126, 126, 135, 138, 140, 143, 143, 144, 151, 151, 161, 169, 175, 180, 180, 181, 181, 183, 207, 212, 215, 224, 240, 241, 241, 246**, 250, 264**, 265, 273, 287, 288, 289, 296, 303, 304, 308, 313, 318, 319, 323, 329, 332, 338, 341, 341, 345, 346, 351, 351, 353, 355, 361, 366, 367, 370, 383, 386, 386, 389, 396, 411, 441, 448, 448, 496, 498, 508, 513, 541, 564, 567, 603, 606, 618, 651, 674, 678, 678, 764, 898

Median Delay for completed works= (250+264)/2= 257 days

Median period of delay for ongoing works:

Delay in number of days	594, 594,594, 594, 594, 595, 595, 595, 595, 595, 595, 595, 811, 823, 847, **851**, 853, 888, 894, 960, 960, 960, 960, 960, 960, 970, 1019, 1031, 1046, 1046, 1131

Median Delay for ongoing works= 851 days

Appendix 3.12

(Referred to in paragraph 3.6.4)

Statement showing detail of extra cost due to execution of Over Head Tank on higher rate

(Amount in ₹)

Sl. No.	Division	Name of PWSS Work/Village	Name of Item	Quantity per Kilo Liter	Rate taken per KL	Rate to be taken/KL	Difference in rate/KL	Tender *per cent* above	Extra cost
1	2	3	4	5	6	7	8=6-7	9	10=5×8 ± tender *per cent*
1	**Rajgarh**	Khuri	Construction of 01 No. RCC overhead tank of 15 meters staging capacity	100	18,000	12,758	5,242	7.85	5,65,350
2		Mau	-do-	125	15,000	11,340	3,660	7.10	4,89,983
3		Bani	-do-	100	18,000	12,760	5,240	6.25	5,56,750
4		Limboda	-do-	100	13,500	12,760	740	7.90	79,846
5		Kharpa	-do-	100	18,000	12,760	5,240	7.90	5,65,396
6		Kundaliya	-do-	100	18,000	12,760	5,240	5.49	5,52,768
7		Bhatkhedi	-do-	90	18,000	12,760[7]	5,240	5.25	4,96,359
8		Tindoniya	-do-	120	16,500	12,760	3,740	8.99	4,89,147
9		Batawda	-do-	100	18,000	12,760	5,240	6.78	5,59,527
10		Barwa Khurram	-do-	100	18,000	12,760	5,240	3.99	5,44,908
11		Mundla Barol	-do-	90	18,000	12,760[7]	5,240	7.16	5,05,367
12		Munda Lodha	-do-	100	18,000	12,760	5,240	8.90	5,70,636
13		Nipaniya Gadhi	-do-	125	15,840	11,340	4,500	7.16	6,02,775
								Total (A)	**65,78,810**
14	**Raisen**	Magardha	Construction of 01 No. RCC overhead tank of 12 meters staging capacity	125	12,448	10,800[7]	1,648	9.99	2,26,579
15		Chilwaha	Construction of 01 No. RCC overhead tank of 18 meters staging capacity	160	12,030	11,140[7]	890	8.79	1,54,917
								Total (B)	**3,81,496**

Sl. No.	Division	Name of PWSS Work/Village	Name of Item	Quantity per Kilo Liter	Rate taken per KL	Rate to be taken/KL	Difference in rate/KL	Tender *per cent* above	Extra cost
16	**Betul**	Chohatapopati	Construction of 01 No. RCC overhead tank of nine meters staging capacity	125	10,800	10,260[7]	540	8.86 below	61,520
17		Patakheda	Construction of 01 No. RCC overhead tank of 15 meters staging capacity	175	12,150	9,450	2,700	7.94	5,10,017
								Total (C)	**5,71,537**
18	**Mandla**	Newsamal	Construction of 01 No. RCC overhead tank of 12 meters staging capacity	100	15,000	12,150	2,850	11.94	3,19,029
								Total (D)	**3,19,029**
								Grand Total (A+B+C+D)	**78,50,872**

[7] Rate of 90 KL capacity was taken as the rate of 100 KL. Rate of 160 KL with staging 18 meter was taken as five *per cent* added in the rate of 150 KL. Rate of 125 KL capacity with staging 09 meter was taken as five *per cent* reduced in the rate of 12 meter staging of 125 KL.

Rate of Over Head Tank

Capacity of over-head tank (In Kilo Liter)	Rate of over-head tank with 12 meter staging (₹ per litre)	Rate of over-head tank with 15 meter staging (₹ per litre)
75	15.30	16.06
100	12.15	12.76
125	10.80	11.34
150	10.10	10.61
175	9.00	9.45

Appendix 3.13

(Referred to in paragraph 3.6.5)

Statement showing irregular payment to the contractors for operation and maintenance (O&M)

Sl. No.	Division	Name of village in PWSS	Date of completion	O&M period (One month + Two years) after completion	Amount Paid (₹ in Lakh)	Voucher No. and date
1	Damoh	Sakor	24.04.20	23.05.22	2.86	20/24.04.20
2	Damoh	Nimarmunda	06.03.20	05.04.22	2.18	20/06.03.20
3	Damoh	Majholi	13.02.20	12.03.22	2.18	12/13.02.20
4	Damoh	Satariya	24.03.20	23.04.22	2.41	101/24.03.20
5	Damoh	Niwas	24.04.20	23.05.22	2.18	21/24.03.20
6	Damoh	Pipariya Tikari	13.03.20	11.04.22	2.14	25/24.04.20
7	Damoh	Salaiya	03.03.20	01.04.22	2.14	112/26.03.20
8	Damoh	Ranjara	05.02.20	06.03.22	2.14	05/04.03.20
9	Damoh	Riyana	28.02.20	29.03.22	2.36	113/26.03.20
10	Damoh	Halgaj	29.02.20	30.03.22	2.86	49/13.03.20
11	Damoh	Kabirpur Mangola	06.01.20	06.02.22	2.18	96/24.03.20
12	Damoh	Kanora Ramnagar	26.01.20	26.02.22	2.14	97/24.03.20
13	Damoh	Sigon	10.02.20	10.03.22	2.14	99/24.03.20
14	Damoh	Tinduwa	14.01.20	14.02.22	2.14	100/24.03.20
15	Damoh	Hinoti Udesha	24.03.20	24.04.22	2.18	108/26.03.20
16	Satna	Kitha	30.04.21	30.04.23	1.50	01/02.03.21
17	Satna	Pagarkalan	30.04.20	31.07.22	1.13	01/07.12.20
18	Morena	Johan	On going	NA	2.75	24/24.12.20, 69/26.08.21
19	Morena	Baretha	On going	NA	3.60	46/27.03.21
	Total	**19 villages**			**43.21**	

Appendix 3.14

(Referred to in paragraph 3.6.8)

Statement showing details of Performance Security (PS) Deposit for PWSS work released to the contractor before its due date for releasing

Sl. No.	Division	Agreement No.	Name of village of PWSS work	Amount of PSD (₹ in lakh)	Date of completion of work	Due date for releasing the PSD	Date of PSD release
1	Raisen	06/18-19	Chainpur	3.75	04.09.19	03.09.21	10.06.20
2	Raisen	07/18-19	Magardha	4.12	15.04.19	14.04.21	10.06.20
3	Raisen	09/18-19	Gurariya	4.05	10.04.19	09.04.21	10.06.20
4	Raisen	10/18-19	Murarichopra	4.35	01.10.19	30.09.21	10.06.20
5	Raisen	11/18-19	Bhusimenta	4.00	23.10.19	22.10.21	09.09.20
6	Raisen	12/18-19	Uchehra Jamuniya	3.39	16.08.20	15.08.22	09.09.20
7	Raisen	13/18-19	Sehora Imaliya	4.22	12.09.20	11.09.22	09.09.20
8	Raisen	14/18-19	Tinghada	3.32	22.03.20	21.03.22	07.12.20
9	Raisen	16/18-19	Gulgaon	4.03	30.04.21	29.03.23	28.06.21
10	Raisen	17/18-19	Samera	3.09	12.07.20	11.07.22	28.06.21
11	Raisen	19/18-19	Bhilariya	2.87	20.06.19	19.06.21	10.06.20
12	Raisen	51/18-19	Khamariya Khurd	3.40	26.01.20	25.01.22	07.12.20
13	Raisen	52/18-19	Udka	2.83	17.09.20	16.09.22	18.09.20
14	Raisen	61/18-19	Nayakheda	3.04	03.09.20	02.09.22	25.08.20
15	Raisen	64/18-19	Khajuriya Gadhi	2.97	05.12.19	04.12.21	09.04.21
16	Raisen	65/18-19	Khedi ta Chauka	2.91	22.03.20	21.03.22	10.06.20
17	Raisen	69/18-19	Borepani	2.46	08.03.20	07.03.22	16.07.20
18	Raisen	70/18-19	Salehpur	2.94	10.05.19	09.05.21	16.07.20
19	Raisen	74/18-19	Bhadon	3.36	16.05.20	15.05.22	25.08.20
20	Raisen	75/18-19	Sultanganj	7.61	22.03.20	21.03.22	08.07.21
21	Raisen	86/18-19	Chandan Pipaliy	2.79	18.12.20	17.12.22	25.11.20
22	Raisen	87/18-19	Paingawa	1.91	28.06.19	27.06.21	18.09.20
23	Raisen	18/19-20	Karmoda	3.50	29.09.20	28.09.22	08.09.20
24	Raisen	42/19-20	Kotpar Ganesh	2.98	18.02.21	17.02.23	11.02.21
25	Betul	32/18-19	Katkhhi	2.96	15.09.19	14.09.21	12.05.20
26	Betul	111/18-19	Nandra	3.35	10.10.19	09.10.21	15.01.21
27	Mandla	53/18-19	Purva	3.93	02.05.20	01.05.22	21.12.20
28	Mandla	52/18-19	Piparpaani	3.88	08.05.20	07.05.22	21.12.20
29	Mandla	48/17-18	Andia Rayyat	2.34	21.10.19	20.10.21	05.01.20
30	Mandla	125/18-19	Pipariya Rayyat	4.11	05.11.19	04.11.21	25.02.21
31	Mandla	79/18-19	Newsamal	6.65	30.03.20	29.05.22	30.12.20
32	Mandla	102/18-19	Lodha	2.59	10.04.20	09.04.22	15.03.21
33	Mandla	45/18-19	Barwani	3.85	30.12.20	29.12.22	15.03.21
34	Mandla	74/18-19	Atriya	3.21	27.06.19	26.06.21	25.02.21
35	Mandla	126/18-19	Paundi	3.67	19.12.19	18.12.21	07.04.21
36	Mandla	75/18-19	Gaujhi	3.40	01.10.19	30.09.21	25.02.21
37	Mandla	130/18-19	Baargi	3.50	09.12.19	08.12.21	07.04.21
38	Mandla	101/18-19	Jagnaathar	2.66	01.08.19	30.07.21	30.12.20
39	Mandla	54/18-19	Madogarh	3.00	30.06.19	29.06.21	16.06.21
40	Mandla	148/18-19	Kachnaari	2.19	31.08.20	30.08.22	22.12.20
41	Morena	11/19-20	Johan	11.99	Ongoing	NA[8]	Amount of PSD released by the
42	Morena	09/19-20	Tutwas,	11.75	Ongoing		
43	Morena	67/18-19	Roophati	9.28	Ongoing		
44	Morena	65/18-19	Baretha	14.44	Ongoing		

8 Due date for releasing the PSD is decided after completion of work. Here the works were not completed. So the PS should have not been released.

Sl. No.	Division	Agreement No.	Name of village of PWSS work	Amount of PSD (₹ in lakh)	Date of completion of work	Due date for releasing the PSD	Date of PSD release
45	Morena	48/18-19	Kaithoda	9.27	Ongoing		divisions before completion of work.
46	Morena	38/18-19	Hingona Khurd	6.34	Ongoing		
47	Morena	64/18-19	Shyampur Kalan	9.58	Ongoing		
48	Morena	12/19-20	Silwali	8.85	Ongoing		
49	Morena	10/19-20	Kuraitha	13.33	Ongoing		
50	Morena	44/18-19	Kaimara Kalan	9.94	Ongoing		
			Total	**243.95**			

Appendix 3.15

(Referred to in paragraph 3.6.8)

Details of Security Deposit (SD) for PWSS work released to the contractor before its due date for releasing

Sl. no.	Division	Agt.no.	Name of the work/village	Date of completion of work	Due date for releasing the SD	Amount of SD Released (in ₹)	Release Date of SD
1	**Mandla**	53/ 18-19	Purva	02.05.20	01.05.22	75,396	21.12.20
						43,720	21.12.20
						18,949	21.12.20
						17,610	21.12.20
2		52/ 18-19	Piparpaani	08.05.20	07.05.22	79,815	21.12.20
						4,112	21.12.20
						22,048	21.12.20
						55,808	21.12.20
						28,230	21.12.20
3		54/ 18-19	Madogarh	30.06.19	29.06.21	30,000	27.12.19
4		86/ 18-19	Bhanpura Kheda	29.02.20	28.02.22	67,020	29.08.20
5		148/ 18-19	Kachnaari	31.08.20	30.08.22	35,000	29.08.20
						1,13,360	29.08.20
						26,530	29.08.20
						55,560	29.08.20
					Total	**6,73,158**	

Appendix 3.16

(Referred to in paragraph 3.7.1)

Deficiencies in Operation and Maintenance of nine completed Schemes

Sl. No.	Scheme	Month of Operation and Maintenance Report	Villages Covered in Scheme	Cost incurred on construction (₹ In crore)	Water Not supplied in month			Water Supply less than 55 Litre Per Capita Per Day			Water Supply Pressure less than seven metre		Villages in which All Households not getting water
					Villages	Minimum Days	Maximum Days	Villages	Population affected	Actual supply (Litre Per Capita Per Day)	Villages	Households	
1	Narhela	Feb-21	32	61.82	11	1	7	7	41,881	53.11	2	-	4
2	Bhatera	Jun-21	18	153.33	-	-	-	-	-	-	-	260	-
3	Devsarra	Jun-21	34		-	-	-	-	-	-	-	135	-
4	Dhuti	Jun-21	20		-	-	-	-	-	-	-	255	-
5	Piparjhari	Jun-21	8		-	-	-	-	-	-	-	62	-
6	Byarma	Oct-20	16	40.03	-	-	-	23	33,514	41.68	20	-	7
7	Manpur	Dec-20	19	48.67	15	1	31	13	37,105	42.05	11	-	-
8	Udgawan	Apr-21	71	86.22	25	1	30	32	31,469	50.91	56	-	12
9	Niwari	Dec-20	23	94.31	31	1	10	14	31,096	50.94	19	-	-
		Total	**241**	**484.38**	**82**	**1**	**31**	**89**	**1,75,065**	**41.68 to 53.11**	**108**	**712**	**23**

Appendix 4.1

(Referred to in paragraph 4.11.4)

Statement showing auxiliary consumption in SSTPS PH-II

Year	Period	Gross generation (MUs)	Auxiliary consumption					Remarks
			Allowed as per MPERC Norms in MUs and *per cent*	Actual in MUs and *per cent*	Excess (in MUs)	Variable cost per unit (in ₹)	Loss due excess Auxiliary consumption (₹ in crore)	
2018-19	18 Nov 2018 to 31 March 2019	1,598.36	83.91 (5.25 *per cent*)	107.27 (6.71 *per cent*)	23.36	2.64	6.15	Monthly Auxiliary consumption ranged between 5.50 and 7.45 *per cent*
2019-20	01 April 2019 to 31 March 2020	4,366.54	251.08 (5.75 *per cent*)	317.10 (7.26 *per cent*)	66.03	2.81	18.52	Against the norms of 5.75 *per cent*, monthly Auxiliary consumption ranged between 6.18 and 22.77 *per cent* except (January to March 2020 wherein it remained 5.34, 4.83 and 5.49 *per cent*
2020-21	01 April 2020 to 31 March 2021	852.86	49.04 (5.75 *per cent*)	106.93 (12.54 *per cent*)	57.89	2.81	16.24	Against the norms of 5.75 *per cent*, monthly Auxiliary consumption ranged between 5.97 and 14,596.67 *per cent*
2021-22	01 April 2021 to 31 August 2021	1,681.96	96.71 (5.75 *per cent*)	117.67 (7.00 *per cent*)	20.96	2.81	5.88	Monthly Auxiliary consumption ranged between 6.38 and 8.17 *per cent*
					168.234		**46.79**	

Appendix 5.1

(Referred to in paragraph 5.7.1)

Non-obtaining of certificate of Gram Sabha/ Collector

Sl. No.	Name of Division	No. of Cases	Diverted land (in Ha)	FRA/ FCA	Status of Compliance
1	Anuppur	19	7.08	FRA	Gram Sabha/ Collector certificate not received
2	Singrauli	30	22.96	FRA	Gram Sabha/ Collector certificate not received
3	South Shahdol	15	6.10	FRA	Gram Sabha/ Collector certificate not received
4	South Sagar	25	10.59	FRA	Gram Sabha/ Collector certificate not received
5	Hoshangabad	33	13.28	FRA	Gram Sabha/ Collector certificate not received
	Total	**122**	**60.01**		

Sl. No.	Name of Division	Project	Diverted land (in ha)	Status of Compliance
1	Singrauli	Railway line	1.57	Collector's certificate not obtained
2	Singrauli	765 KV double circuit line	167.02	Gram Sabha/Collector's certificate not obtained
3	South Sagar	Maharajpur to Sahajpur road and Bhusaura-Nanhi-Deori-Naharmau road	3.44	Gram Sabha/Collector's certificate not obtained
4	Gwalior	765 KV Bina-Gwalior transmission line	27.99	Gram Sabha/Collector's certificate not obtained
5	Gwalior	765 KV Satna-Gwalior transmission line	22.76	Gram Sabha/Collector's certificate not obtained
6	Gwalior	765 KV Gwalior-Jaipur double circuit line	49.99	Gram Sabha/Collector's certificate not obtained
	Total		**272.77**	

Appendix 5.2

(Referred to in paragraph 5.7.1)

Irregularities in Cost-Benefit Analysis

Sl. No.	Name of Division	Project	Area of diverted land (in Ha)	Status of Compliance	Item of cost not included	Cost of item not included (in ₹)
1	Singrauli	765 KV Double Circuit Vindhyachal-Pulling-Jabalpur Transmission line	241.10	C-B analysis not done.	Not Applicable	0
2	Nauradehi	Upgradation of NH-12	39.75	C-B analysis not done.	Not Applicable	0
3	Nauradehi	Construction of Nirandpur tank	30.76	C-B analysis not done.	Not Applicable	0
4	Hoshangabad	Upgradation of NH-69	153.54	Cost Benefit Analysis done erroneously	Revenue forest of 40.55 ha. area was excluded from cost. Basis of benefit calculation was not there in the records.	0
5	South Shahdol	Amlai Open Cast Mine	166.92	C-B analysis not done.	Not Applicable	0
6	South Shahdol	Batura Open mines	76.84	Cost Benefit Analysis done erroneously.	Short value taken of loss of Value of Fodder (Grass)	43,48,184
7	South Shahdol	Methane Gas Extraction Project	77.05	Cost Benefit Analysis done erroneously.	Short value taken of loss of Value of Fodder (Grass)	58,24,857
8	South Sagar	Surajpura Tank	28.90	Cost Benefit Analysis done erroneously.	Non-addition of Possession value and figures not verified from records	0
9	Bhopal	National Technical Research Organisation,	180.00	C-B analysis not done.	Not Applicable	0
		Total	**994.86**			**1,01,73,041**
		Total (Error in calculation) four cases	**336.33**			
		Total (Cost Benefit Analysis not done) 5 cases	**658.53**			

Appendix 5.3

(Referred to in paragraph 5.7.2)

Diversion of less forest land

(₹ in lakh)

Sl. No.	Name of Division	Name of road	User Agency	Sanction date	Required measurement of road			Measurement taken of road			NPV		Short recovery of NPV
					Length	Width	Area (in ha)	Length	Width	Area (in ha)	to be recd.	Recd.	
1	South Shahdol	Godinbuda to Chinmar	RES	30.05.18	2495	8.89	2.22	2495	4	0.99	13.90	0	13.90
2	South Shahdol	ChuhiriLafda to Mayka	PWD	18.07.19	1306	10	1.31	1306	7.50	0.98	8.18	0	8.18
3	South Shahdol	Fatehpur to Aaijajhar	PWD	07.03.19	1200	10	1.20	1200	6	0.72	7.51	0	7.51
4	South Shahdol	Jhink to Athriti	MPRRDA	24.06.19	1600	10	1.60	1600	6	0.96	10.02	0	10.02
5	South Sagar	Maharajpur to Sahajpur	MPRDC	27.03.18	3200	18.08	5.79	3200	8	2.56	36.22	0	36.22
6	South Sagar	Bhusaura-Nanhi-Deori-Naharmau	MPRRDA	23.05.20	1950	10	1.95	1950	4.50	0.88	12.21	0	12.21
7	Anuppur	Pathaiti to Gadidadar	MPRRDA	02.08.18	5000	10	5.00	5000	7.50	3.75	28.15	21.11	7.04
8	Anuppur	Pipariya to Saristal	MPRRDA	29.01.18	2800	10	2.80	2800	7.50	2.1	15.76	11.82	3.94
9	Anuppur	Bamhani to Keshwani	PWD	02.05.18	5342	10	3.54	5342	7.50	2.66	19.94	14.95	4.99
10	Anuppur	Amgava to Poudi	PWD	11.05.18	6600	10	6.60	6600	7.50	4.63	55.77	39.13	16.64
				Total			**32.01**			**20.23**			**120.65**

NPV is calculated at minimum rate of ₹ 6.26 lakh per ha.

Appendix 5.4

(Referred to in paragraph 5.7.4.1 and 5.7.5)

Non-notification and Short/non-receipt of revenue land

(Area in hectare)

Sl. No.	Name of Division	Project	Area of diverted forest land	Date of Approval for diversion	Area of revenue land received	Short receipt of land	Delay in months
1	Anuppur	Methane Gas Project	77.07	11.03.16	18.58	58.49	48
2	Singrauli	NH-75	60.80	03.11.15	53.05	7.75	52
3	South Shahdol	Diyapipar Tank	3.08	22.05.18	0.00	3.08	22
		Total	**140.95**		**71.63**	**69.32**	

Sl. No.	Name of Division	Project	Area of diverted forest land	Date of Approval for diversion	Area of revenue land received	Delay in months
1	Anuppur	Thermal Power Project (Barrage)	35.44	30.05.14	37.11	70
2	Hoshangabad	400 KV Bhopal Indore transmission line	6.99	21.09.15	7.95	54
3	South Shahdol	Methane Gas extraction Project	80.85	03.01.18	81.64	26
4	East Chhindwara	Mohgaon Jalashay	48.16	07.07.14	48.16	69
5	East Chhindwara	C B M Project	63.05	28.04.17	63.05	35
6	Gwalior	Karahiya Aaronvaya Golar Ghati	8.32	29.12.14	8.32	63
7	Chhatarpur	Iron Ore Khaira majhaura	4.89	05.08.15	4.89	55
8	Khandwa	Palasi minor irrigation project	17.16	24.10.18	17.16	17
9	Khandwa	Awalia medium irrigation project	54.60	03.07.18	54.60	21
10	Khandwa	Rajgarh Bhag Irrigation Project	148.75	31.10.18	148.75	16
11	Ratlam	Umaran Jalashay	7.76	06.03.19	7.76	13
12	Ratlam	Gadavadiya Jalashay	12.77	22.01.19	12.77	14
		Total	**488.74**		**492.16**	
		Grand Total	**629.69**		**563.79**	

Appendix 5.5

(Referred to in paragraph 5.7.6.1)

Non-Compliance of conditions of sanction of forest land diversion

(₹ in lakh)

Sl. No.	Name of Division	Project	Area of diverted land (in ha.)	Date of Approval	Condition No.	Brief of Condition	Status of Compliance	Delay in months	Whether DPR prepared (Yes/No)	Project cost Not realised (if any)
1.	Singrauli	Nigahi Open cast Mine	424.52	12.04.18	2 (i)	Preservation as Safety Zone,	Plans for Safety Zone, minimising soil erosion and choking of streams and Gap plantation were not prepared.	23	No	Not available
					XIII	minimise soil erosion and choking of streams and Gap Plantation			No	Not available
									No	Not available
2.	South Shahdol	Methane Gas extraction Project	80.85	20.03.17	xxviii, xxix	Gap plantation and SMC activity,	DPR not prepared	36	No	Not available
						Desilting of tanks and other water bodies in the periphery of 5 Km			No	Not available
3.	South Shahdol	Batura Open Cast Mine	66.18	20.11.17 16.07.19	iii, xxiv, x, iii	Mining activity shall not be carried out up to an aerial distance of 250 meter from the outer boundary of the river/nala and Environment Clearance.	This was not included in the TOR	9	Not required	Not applicable
						Gap planting and soil & Moisture conservation activities.	Project was neither prepared for Gap Plantation and SMC activities nor executed.		No	Not available
						Fencing, Protection and Regeneration in safety Zone area and afforestation on 1.5 times the safety zone are in RDF.	Plan was not preparedfor both the work in safety zone and RDF.		No	Not available
						Obtaining of Environment clearance.	Environment clearance not		Not required	Not applicable

Sl. No.	Name of Division	Project	Area of diverted land (in ha.)	Date of Approval	Condition No.	Brief of Condition	Status of Compliance	Delay in months	Whether DPR prepared (Yes/No)	Project cost Not realised (if any)
							obtained.			
4.	Chhatarpur	Jindutt Minerals Pvt ltd.	4.89	05.08.15	11	Reclamation of Mined out area	Reclamation plan not prepared.	56	No	Not available
					7	Gap plantation and SMC activities	Condition not complied with.	56	No	Not available
					9	Plantation in safety zone	Condition not complied with.	56	No	Not available
5.	North Betul	The diversion of 39.82 ha (3.13 Ha PF & 36.68 ha Revenue Forest) Village-Keriyaumari for extension of underground mined area	39.82	20.12.19	6 (a to e), 7,8,9,10, 11,14,15, 19	Mitigation measures to minimize soil erosion and choking of streams. Planting of drought hardy plant species. Construction of check dams, retention/toe walls. Stabilize the overburden dumps by appropriate grading/benching. Strict adherence to the prescribed top soil management. Safety Zone to be constructed. Fencing the boundary of the safety zone. Afforestation on degraded forest land to be selected elsewhere measuring one and half times the area of forest land under safety zone was to be conducted. Gap planting and SMC activities were to be conducted. Boundary of the mining lease and safety zone was to be demarcated.	Works not executed.	4	No	NA
6.	Anuppur	Thermal Power Project (Barrage Construction)	35.44	30.05.14	7,8,11	Erecting Pillars for demarcation and preparation of Muck disposal and soil conservation plan.	DPR not prepared	70	No	Not available

Sl. No.	Name of Division	Project	Area of diverted land (in ha.)	Date of Approval	Condition No.	Brief of Condition	Status of Compliance	Delay in months	Whether DPR prepared (Yes/No)	Project cost Not realised (if any)
7.	Singrauli	765 KV Vindhyachal-Pulling-Jabalpur Transmission line	241.10	20.11.17	4, 10, 17 & 19	Providing bird deflector, demarcation of diverted land, installation of circuit breaker and planning for muck disposal	Not executed.	28	Not required	Not applicable
8.	Singrauli	400 KV Singrauli-Allahabad Single Circuit transmission line	1.85	20.09.18	PCCF (LM) letter, dt.01.05.13	APCCF's report provided for felling of 113 trees. Demarcation by CC poles and plan for muck disposal.	No plan for felling of these trees.	18	No	Not available
					12 and 17		Conditions 12 and 17 not complied with.	18	Not required	Not applicable
9.	Singrauli	Amlori Open Cast Mining	1195	12.12.18	2(4), 2 (14) and 2 (15)	Mitigation measures, Preparation of plan for Safety zone plantation.	Project for Mitigation measures and Safety zone were not prepared.	15	No	Not available
10.	Nauradehi	Updation of NH-12	39.75	28.09.18	10, 17 and 18	Fencing by boundary and preparation of muck disposal and soil conservation plans	DPRs for these activities were not prepared, and hence, demand for money was not made.	18	No	Not available
11.	Nauradehi	Sokheda-Suhela to Hinota road, Somkheda to Suhela road and Taradehi-Bamhori to Kotkheda road	14.26	29.01.16 & 30.01.16	5	No upgradation of existing road	The roads had provision for conversion from BT road to CC road.	51	Not required	Not applicable

Sl. No.	Name of Division	Project	Area of diverted land (in ha.)	Date of Approval	Condition No.	Brief of Condition	Status of Compliance	Delay in months	Whether DPR prepared (Yes/No)	Project cost Not realised (if any)
12.	Hoshangabad	Sonatlai-Bagartawa Railway line	12.54	13.04.18	4	Construction of Box culverts, Cattle proof barriers, Fencing, measures to ensure free-flow of water, etc.	DPR not prepared	23	No	Not available
13.	North Sagar	Bina irrigation and multipurpose project	1,024.44	11.07.18	11,12	Environment Clearance and implementation of catchment area treatment plan and Wildlife conservation plan	Environment Clearance was not obtained from GoI, Catchment Area treatment plan was not implemented and Wildlife Conservation plan was not implemented.	20	Yes	4.23
14.	South Shahdol	Dhanpuri Underground Coal Mine	65	09.08.14	2 (viii),	Forest land on surface of the mining lease shall be fenced and afforested by the user agency.	Not executed	68	No	Not available
					(ix)	Take appropriate mitigation measures for mining induced subsidence		68	No	Not available
15.	South Shahdol	Amlai open cast mine	166.92	07.07.17	25, 26	Fencing, Safety zone plantation	Not executed due to demanded amount not received from user agency.	33	Yes	31.92
16.	South Sagar	Surajpura Tank	28.9	20.05.15	MoEFCC direction	CAT plan was to be approved and executed.	CATP was neither got approved nor executed.	69	No	Not available
					12	Demarcation of boundary by erecting *Munaras*	Demarcation work not executed.			
17.	South Sagar	Parkul Medium Irrigation Project	38.98	12.06.19	5	CAT plan was to be approved by APCCF and executed.	CATP was neither got approved from APCCF nor executed.	10	Yes	27.56 lakh

Sl. No.	Name of Division	Project	Area of diverted land (in ha.)	Date of Approval	Condition No.	Brief of Condition	Status of Compliance	Delay in months	Whether DPR prepared (Yes/No)	Project cost Not realised (if any)
18.	East Chhindwara	Construction of Jalashay and Nahar in Seetajhir	36.18	28.04.17	6	Plantation will be done in the periphery of the reservoir by the user agency.	No monitoring has been done by the office, nor any records, photographs etc. have been maintained, which does not prove that the work has been done by the user agency/office.	36	No	Not available
					11	After demarcating the diverted land, four feet height pillars should be established and necessary details like simple number, distance between two pillars etc. should be marked on them.	No monitoring has been done by the office, nor any records, photographs etc. have been maintained, which does not prove that the work has been done by the user agency/office.	36	NA	NA
19.	Gwalior	765 KV Gwalior-Jaipur double circuit transmission line	49.99	25.05.14	2(XII)	4 feet pillars high were to be erected	Pillar erecting work not commenced.	72	Yes	15.30
20.	Gwalior	765 KV Satna-Gwalior transmission line	22.76	01.11.13	2(VII)	4 feet pillars high were to be erected	Pillar erection work not started. An amount collected from UA and was deposited in revenue head, instead of CAMPA.	84	Yes	9.26
21.	Gwalior	765 KV	27.99	03.03.14	2-(XI)	4 feet pillars high were to be	Pillar erecting work	72	Yes	11.68

Sl. No.	Name of Division	Project	Area of diverted land (in ha.)	Date of Approval	Condition No.	Brief of Condition	Status of Compliance	Delay in months	Whether DPR prepared (Yes/No)	Project cost Not realised (if any)
		Bina-Gwalior 3 single Circuit transmission line				erected	not started.			
22.	Gwalior	765 KV Gwalior-Jaipur transmission line through Son Chiriya WLS	20.77	03.11.15	12	4 feet pillars high were to be erected	Pillar erecting work not started.	60	Yes	5.01
23.	Gwalior	Research and Development centre of DRDO	472.08	19.03.18	11	Cost of felling of trees shall be deposited by the UA	An amount worked out for felling was not collected from the UA.	24	Yes	10.20
					8	Soil conservation scheme	Soil conservation plan not prepared.	24	No	Not available
					XIX	Permission from NBWL to be obtained.	Permission not obtained	24	Not required	Not applicable
24.	Chhatarpur	Chhatarpur minerals Pvt. Ltd Pyrophilite	4.95	25.01.17	7	Fencing, protection and afforestation of the safety zone area at the project cost.	Condition not complied with.	39	No	Not available
					15	The boundary of the diverted forest land shall be demarcated on the ground erecting four feet high RCC pillars.	Condition not complied with.	39	No	Not available
25.	Chhatarpur	NH- 75/76 Jhansi-Khajuraho	18.51	9.05.19	5	Raising of strip plantation on both sides and central verge of the road.	Condition not complied with.	10	No	Not available
					7	Provision of suitable under/over pass in forest area.	Site selection for construction of over/under passes	10	No	Not available

Sl. No.	Name of Division	Project	Area of diverted land (in ha.)	Date of Approval	Condition No.	Brief of Condition	Status of Compliance	Delay in months	Whether DPR prepared (Yes/No)	Project cost Not realised (if any)
							was not demarcated.			
					12	The boundary of the diverted forest land shall be demarcated.	Condition not complied with.	10	No	Not available
26.	North Betul	Upgradation of Obedullahganj- Betul NH-69	73.19	17.06.13 & 23.07.14	7	On both sides and middle of the road at the expense of the user agency the plantation will have to be done on the condition of being maintained for 10 years.	Not done	67	Yes	52.86 lakh not realised
					13	Demarcation of diverted land by erecting four feet high pillars.	Not done	67	NA	NA
27.	North Betul	SaliwadaJalashayaYojna	0.50	10.05.16	10	Demarcation of diverted land with 4 feet RCC pillar	Not done	47	No	NA
					1 to 23	Various conditions.	Non-compliance of any of the 23 conditions.	47	No	NA
28.	North Betul	400 KV Satpura-Ashta electric pareshan line under Hoshangabad, North Betul, Sehore and Dewas	106.15	02.11.13	vii (d)	Implementation of detailed scheme for creation and maintenance of plantation of dwarf species (preferably medicinal plants)	Not complied with.	77	No	Not realised
					X	Demarcation of diverted land by erecting four feet high RCC pillars.	Not complied with.	77	No	Not realised
	11 Division						**Max**	**84**		
							Min	**4**		

Appendix 5.6

(Referred to in paragraph 5.7.7.2)

Short Recovery of Amount for Compensatory Afforestation

(₹ in lakh)

Sl. No.	Division	User Agency	Project	Sanction date	Area diverted (in ha)	Area of CA (in ha)	Recoverable CA Amount	Received CA Amount	Balance Amount of CA	Remarks
1	Khandwa	Water Resource Department	Palasi Minor Irrigation Project	24.10.18	17.16	17.16	169.84	88.65	81.19	Due to applying less labour rate than prevailing.
2	Khandwa	High Pressure Construction Div.	220KV transmission line	27.08.18	4.65	9.30	161.56	127.10	34.46	Due to applying less labour rate than prevailing.
3	Chhatarpur	NHAI	NH- 75/76	09.05.19	18.51	40.00	134.49	104.27	30.22	The project was revised, due to inclusion of 10 year maintenance period.
4	North Betul	NHAI	Upgradation of Obedullahganj - Betul NH 69	17.06.13 & 23.07.14	73.19	147.19	259.56	0	259.56	Amount of Road side plantation not recovered.
				Total	**113.51**	**213.65**	**725.45**	**320.02**	**405.43**	

Appendix 5.7

(Referred to in paragraph 5.7.7.3)

Short/Non-recovery of Entry Point Activities, Human Resource Development and Monitoring and Evaluation

(₹ in lakh)

Sl. No.	Name of Division	Name of Project	Area of diverted land (Ha.)	Project cost (in Lakh)	Recoverable amount on account of				Recovered amount on account of				Short recovery (₹ in lakh)	Reasons of short recovery
					EPA	HRD	M&E	Total	EPA	HRD	M&E	Total		
1	Indore	Lotia Nala Talab	14.50	47.16	5.66	1.41	9.43	16.51	2.36	1.89	0.47	4.72	11.79	Not available
2	East Chhindwara	Seetajhir tank	36.18	151.43	18.17	4.54	30.29	53.00	0	0	0	0	53.00	Not available
3	Ratlam	Dumala Tank Diversion Project	12.38	8.17	0.98	0.25	1.63	2.86	0	0	0	0	2.86	Due to application of less labour rates
4	South Sagar	Hilgan Tank Project	45.23	194.25	23.31	5.83	38.85	67.99	9.71	7.77	1.94	19.43	48.56	DPR not revised as per instruction
5	South Sagar	Jamuniya Goud Project	39.94	289.66	34.76	8.69	57.93	101.38	14.48	11.59	2.90	28.97	72.42	DPR not revised as per instruction
		Total	**148.23**	**690.67**	**82.88**	**20.72**	**138.13**	**241.74**	**26.55**	**21.25**	**5.31**	**53.12**	**188.63**	

Appendix 5.8

(Referred to in paragraph 5.7.7.4)

Non/Short recovery of Supervision Charges

Sl. No.	Division	Name of Project	Project Cost of CA including EPA, HRD and M&E	Supervision Charge recoverable	Supervision Charge recovered	Short recovery	Reasons for Short recovery
1	Anuppur	MB Power Limited	1,03,21,449	10,32,145	7,64,551	2,67,594	Exclusion of cost of EPA, HRD and M&E in calculation.
2		Haldibadi under-ground Mine	1,62,41,837	16,24,184	12,03,099	4,21,085	
3		Shitaldhara-Kapildhara Under-ground Mine	4,84,68,379	48,46,838	35,90,250	12,56,588	
4	Gwalior	Maharajpura Air Force station	1,08,73,370	10,87,337	0	10,87,337	-
5	Gwalior	765 KV Gwalior-Jaipur double circuit transmission line	96,98,261	9,69,826	8,44,826	1,25,000	Exclusion of cost of chain link fencing.
		Total	**9,56,03,296**	**95,60,330**	**64,02,726**	**31,57,604**	

Appendix 5.9

(Referred to in paragraph 5.8.1.1)

Preparation of erroneous detailed project report

(Amount in ₹)

Sl. No.	Division	Project	Area of Plantation (in Ha.)	Project Cost	Year of Sanction of land Diversion	Year of Implementation of DPR (As per DPR)	Required year of implementation of DPR	Annual labour rate increase accounted for (in *per cent*)	Loss on account of error
1	Singrauli	Dudhichua Open Cast Mining	936	46,92,94,414	Apr-18	2015-16	2017-18	10	11,12,55,506
2	South Shahdol	Dhanpuri mines	65	8,95,51,558	Jul-14	2014-15	2016-17	10	80,67,038
3		Amlai Open cast mines	8	31,91,933	Jul-17	2017-18	2019-20	10	6,70,306
4		Methane Gas Project	77.05	3,10,09,592	Jan-18	2016-17	2018-19	10	65,12,014
5	South Sagar	Jamuniya Goud Irrigation project	39.94	3,18,62,441	Jun-18	2017-18	2019-20	10	66,91,112
6		Parkul Irrigation Project	39	3,55,57,500	Jun-19	2017-18	2019-20	10	7,46,707
7	Gwalior	Maharajpura Airforce Station	17	1,08,73,370	Apr-19	2020	2018	10	10,69,287
8	Khandwa	220 KV Chhanera Transmission line	9.30	1,27,09,896	Aug-18	2017-18	2020-21	24.36 and 35.71	34,46,494
9	Chhatarpur	Chhatarpur minerals	4.95	55,01,452	Jan-17	2016-17	2019-20	10	11,55,304
10		Jhansi-Khajuraho NH	40	1,11,15,224	May-19	2018-19	2021-22	10	30,21,810
11	Indore	400 KV Khandwa-Indore Transmission line	13.29	1,42,07,723	Aug-19	2018-19	2020-21	19	26,99,467
12	Ratlam	Dumala Talab Diversion Project	12.38	52,45,817	Aug-17	2017-18	2019-20	10	11,02,764
		Total	**1,261.92**	**72,01,20,920**					**14,64,37,809**

Appendix 5.10

(Referred to in paragraph 5.8.1.2)

Erroneous site selection for plantation

Sl. No.	Division	CA Project	Area of Plantation (in Ha.)	Site density	Provision of No. of saplings	Any other condition of poor site
1	Anuppur	R-12	25	0.5	15,625	Nil
2		R-46	25	0.5	15,625	Nil
3	Singrauli	P-89, 668, 293 and 408	136	Dense forest		Nil
4	Hoshangabad	P-46	10	Dense forest		Compartment was categorised under Selection-cum-Improvement (SCI) Circle, Google maps indicate high density on the co-ordinates of plantation.
5		P-93, 289, 42, 106	119	0.5		Includes an area of 92 ha. of SCI circle.
6		P-93	235	Dense Forest	2,66,300	Compartment under SCI Circle, treatment was carried out over an area of 90.246 ha. of compartment in 2017-18. However, only 47.109 ha. had density of 0.2 to 0.4.
7		194	25	0.5	15,625	The Compartment had 5000 clump of diameter 1 to 2 m each.
8		R-205, 195	50	More than 0.4		Nil
9		368	100	0.6 to 0.8		The Compartment was categorised under SCI circle and had 28270 clump of diameter 1 to 3 m each and there was only 31.3 ha. blank area in this compartment. As per Working Plan, an area of 112.29 ha. of compartment was scheduled for regular treatment in 2020-21.
10		377	100	0.6 to 0.8		The Compartment was categorised under SCI circle and there was only 19.554 ha. blank area in this compartment. The compartment had 33450 clump of diameter 1 to 3 m each As per Working Plan, an area of 88.592 ha. of compartment was treated in the year 2018-19.
11	South Shahdol	RF-992	50	0.5	50,000	Nil
	Total		**875**			

Appendix 5.11

(Referred to in paragraph 5.11.2)

Irregularities in procurement

Sl. No.	Division	Financial Year	Item	Amount spent in FY	Competent Authority	Sanctioning Authority	Whether tender required (Y/N)	Whether purchase order was split	If yes, No. of purchase orders
1	Anuppur	2017-18	RCC Poles, Chainlink, Cement, Barbed Wire, Grit, Vermi compost, etc.	20,38,576	CCF	DFO	Yes	No	NA
		2018-19	RCC Poles, Chainlink, Cement, Barbed Wire, Grit, Vermi compost, etc.	95,39,319	CCF	DFO	Yes	No	NA
		2019-20	RCC Poles, Chainlink, Cement, Barbed Wire, Grit, Vermi compost, etc.	5,30,98,582	CCF	DFO	Yes	No	NA
2	South Shahdol	2017-18	RCC Poles, Chainlink, Cement, Barbed Wire, Grit, Vermi compost, etc.	46,67,919	CCF	DFO	No	No	NA
		2018-19	RCC Poles, Chainlink, Cement, Barbed Wire, Grit, Vermi compost, etc.	28,72,359	CCF	DFO	No	No	NA
		2019-20	RCC Poles, Chainlink, Cement, Barbed Wire, Grit, Vermi compost, etc.	11,70,069	CCF	DFO	No	No	NA
3	South Sagar	2017-18	RCC Poles, Chainlink, Cement, Barbed Wire, sand, metal & steel	61,55,681	CCF	DFO	No	No	NA
		2018-19	RCC Poles, Chainlink, Cement, Barbed Wire, sand, metal & steel	2,17,44,500	CCF	DFO	No	No	NA
		2019-20	RCC Poles, Chainlink, Cement, Barbed Wire, sand, metal & steel	2,34,50,587	CCF	DFO	No	No	NA
4	East Chhindwara	2019-20	Barbed Wire	13,12,773	PCCF	CCF	No	Yes	13
		2019-20	Chain link Fencing	38,56,388	PCCF	CCF	No	Yes	8
5	Khandwa	2018-19	Chain link, Fencing, Barbed Wire	79,03,421	PCCF	DFO	Yes	No	NA
		2019-20	Chain link, Fencing, Barbed Wire	39,94,225	PCCF	DFO	Yes	No	NA

Appendix 5.12

(Referred to in paragraph 5.11.4.4)

Non-updation of e-Green watch portal

Sl. No.	Division	No. of forest land Diversion cases	No. of Cases of which entries on portal	Shortcomings in entries made	Amount received during 2017-20 (₹ in crore)	No. of Activities	Entries made in r/o No. of cases	Shortcomings in entries
1	Anuppur	48	0	Diversions for coal mines, road construction, power plant, different capacity electricity line, water pipe line and railway line pertaining to the cases were missing	3.20	62	61	Only entries of plantation were made. As per FSI, there was much difference between mentioned and calculated area, digital error and polygon falling outside India
2	Singrauli	4	3	In one case entry had not been made.	33.62	40	40	Details of Plantation done, Plantation Journal and Work Progress (Physical and Financial)
3	Nauradehi	0	0	-	65.93	12	0	Amount of ₹ 63.23 Crore for the year 2017-18 and 2018-10 was received, however, no entry was made on the portal.
4	South Sagar	152	7	-	11.94	91	114	Only entries of plantation were made. As per FSI, there was much difference between mentioned and calculated area, digital error and polygon falling outside India
5	Hoshangabad	47	47	Details of land diversion for relocated villages from Satpura Tiger Reserve were not made on the portal	10.64	50	0	Details missing on the portal.
6	Sagar North	46	20	There was difference in the mentioned area and area calculated by FSI.	25.44	49	28	Work in excess/short of area. Maps uploaded were different from site map.
7	East Chhindwara	14	0	Full details not found	21.90	121	0	Details missing on the portal.
	Total	**311**	**77**		**172.67**	**425**	**243**	

GLOSSARY

Glossary of Abbreviations	
ACS	Additional Chief Secretary
ACFs	Assistant Conservator of Forests
AHP	Ash Handling Plant
APCCF	Additional Principal Chief Conservator of Forests
APO	Annual Plan of Operation
APRDS	Auxiliary Pressure Reducing and De-superheating System
ATPS	Amarkantak Thermal Power Station
BoD	Board of Directors
CA	Compensatory Afforestation
CAF	Compensatory Afforestation Fund Act, 2016
CAG	Comptroller and Audit General of India
CAMPA	Compensatory Afforestation Management and Planning Authority
CAT	Catchment Area Treatment
CCF	Chief Conservator of Forests
CDM	Clean Development Mechanism
CE	Chief Engineer
CEA	Central Electricity Authority
CEO	Chief Executive Officer
CER	Certified Emission Reductions
CERC	Central Electricity Regulatory Commission
CHP	Coal Handling Plant
CoD	Commercial Operation Date
CPCB	Central Pollution Control Board
CPU	Condensate Polishing Unit
DC	Declared Capacity
DFO (G)	Divisional Forest Officer (General)
DNA	Designated National Authority
DPR	Detailed Project Report
DPRs	Detailed Project Reports
EAC	Expert Advisory Committee
EC	Environmental Clearance
ED	Executive Director
EPA	Entry Point Activities
EPC	Engineering, Procurement and Construction
ERV	Exchange Rate Variation
ESP	Electrostatic Precipitator
FCA	Forest (Conservation) Act, 1980
FD	Forest Department
FGD	Flue Gas Desulfurization
FO	Furnace Oil

FR	pre-Feasibility Report
FRA	Scheduled Tribes and other Traditional Forest Dwellers (Forest Rights Recognition) Act, 2006
FSA	Fuel Supply Agreement
GCV	Gross Calorific Value
GoI	Government of India
GoMP	Government of Madhya Pradesh
GSHR	Gross Station Heat Rate
GST	Goods and Service Tax
HoFF	Head of Forest Force
HRD	Human Resource Development
HSD	High Speed Diesel
IDC	Interest During Construction
IEDC	Incidental Expenditure During Construction
IFA	Indian Forest Act, 1927
JPY	Japanese Yen
JV	Joint Venture
kCal	Kilocalorie
KM	Kilo Meter
kWh	Kilowatt-hour
L&T	Larsen & Toubro
LD	Liquidated Damages
LDO	Light Diesel Oil
LM	Land Management
LoA	Letter of Award
MCM	Million Cubic Meter
MD	Managing Director
ME	Monitoring and Evaluation
MoC	Ministry of Coal
MoEF	Ministry of Environment and Forest
MoEFCC	Ministry of Environment, Forest and Climate Change
MoP	Ministry of Power
MPERC	Madhya Pradesh Electricity Regulatory Commission
MPPCB	Madhya Pradesh Pollution Control Board
MPPGCL	Madhya Pradesh Power Generating Company Limited
MPPMCL	Madhya Pradesh Power Management Company Limited
MPSFDC	Madhya Pradesh State Forest Development Corporation Limited
MT	Metric Ton
MTPA	Million Tonnes Per Annum
MU	Million Units

MW	Mega Watt
MYT	Multi Year Tariff
NAPAF	Normative Annual Plant Availability Factor
NCL	Northern Coalfields Limited
NGT	National Green Tribunal
NOx	Oxides of Nitrogen
NPV	Net Present Value
NTPC	National Thermal Power Corporation
NVDC	Narmada Valley Development Corporation
O&M	Operation and Maintenance
OEM	Original Equipment Manufacturer
PAF	Plant Availability Factor
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PFC	Power Finance Corporation Ltd.
PG	Performance Guarantee
PH	Power House
PLF	Plant Load Factor
PM	Particulate Matter
PPA	Power Purchase Agreement
PV	Price Variation
RF	Reserved Forest
RMU	Ring Main Unit
RoE	Return on Equity
SCOD	Schedule Commercial Operation Date
SCR	Selection Catalytic Reduction
SE	Superintending Engineer
SECL	South Eastern Coalfields Limited
SGTPS	Sanjay Gandhi Thermal Power Station
SLDC	State Load Dispatch Centre
SLSC	State Level Steering Committee
SNCR	Selection/Selective Non-Catalytic Reduction
SO2	Sulphur Dioxide
SSTPS	Shree Singaji Thermal Power Station
STPS	Satpura Thermal Power Station
SWAS	Steam and Water Analysis System
TDS	Tax Deducted at Source
TPSs	Thermal Power Stations
UA	User Agency
UNFCCC	United Nations Framework Convention on Climate Change

USD	United States Dollar
WCL	Western Coalfields Limited
WRD	Water Resource Department
WSA	Water Supply Agreement
WT	Wagon Tippler