

## CHAPTER-V: QUALITY ASSURANCE & MONITORING

### 5.1 Quality Assurance

Quality assurance which involves testing and inspection of material and workmanship is extremely important in public works projects in view of their vast and complex network and involvement of huge amount of public funds. Audit findings in this regard are given in the succeeding paragraphs.

#### 5.1.1 No Provision of Third-Party Inspection

As per CCS Note 2010, provision for third party inspection was to be made to ensure quality and timely completion of the scheme. Audit noted that neither MHA nor the executing agencies made such provision. In the absence of an independent third party inspection, the quality of works executed by all the executed agencies could not be verified.

MHA informed (December 2021) provision of third party inspection is being considered by MHA. Views of State Governments have also been sought for the same.

#### 5.1.2 Mandatory quality tests of materials

**Uttar Pradesh:** Section 900 of MoRTH Standard Data Book prescribes various types of tests to be carried out for road construction work. Further, as per SGoUP instructions (August 1996), 25 *per cent* test samples, out of total samples, would be sent to Research Development and Quality Promotion Cell (QPC), Lucknow, 25 *per cent* samples to Regional Laboratory and remaining 50 *per cent* test samples would be sent to District Laboratories for testing and construction material will be used based on testing report. If District Laboratory is not available, samples will be sent to Regional Laboratory/QPC. Audit, however, observed shortfalls in tests to be carried out (as of December 2019) as given in **Table No. 10**

**Table No. 10: Shortfall against tests required to be carried out**

Sl. No.	Road levels	No. of tests to be carried out	No. of tests carried out	Shortfall (Percentage)
1.	Earthwork	24,125	5,328	18,797 (78)
2.	Granular Sub Base (GSB)	3,595	2,180	1,415 (39)
3.	Wet Mixed Macadam/Water Bound Macadam (WMM/WBM)	6,037	2,630	3,407 (56)
4.	Dense Bituminous Macadam/Bituminous concrete (DBM/BC)	3,906	2,800	1,106 (28)
5.	Dry Lean Concrete (DLC)	6,686	595	6,091 (91)

Source: MoRTH specifications and PWD Divisions

As evident from the above, the maximum shortfall of tests was in “DLC” followed by “Earthwork”. Further, against the norm of 50 *per cent* samples required to be sent to QPC and

RI, only 0.58 *per cent* samples were sent and no sample was sent to the district laboratories for testing.

The SGoUP stated (January 2020) that tests were carried out at site as far as possible in accordance with Section 900 of MoRTH. Third party tests and tests at QPC were also carried out to ensure quality control.

The reply was not acceptable, as CE, INB, while replying to an audit query had accepted (June 2019) that third party inspections were not carried out. Further, the Department cannot absolve itself from the primary responsibility of mandatory tests to be carried out in terms of the instructions laid down in SGoUP order issued in August 1996 as there was a shortfall of almost 100 *per cent* tests carried out at QPC Lucknow. Tests carried out at site laboratories of the contractors cannot be fully relied upon.

Thus, due to non-observance of rules and orders for ensuring quality control, the quality of road works being executed by the UPPWD was fraught with the risk of sub-standard work.

MHA stated (December 2021) that the progress of work and quality is being monitored by State PWD and reported to MHA and SSB. State executing agencies have installed testing laboratory at sites for conducting day-to-day tests as per contract provisions to ensure quality. Tests are also carried out at State Lab functional at their Division level. Quality of work is being monitored by executing agencies by strict supervision and conducting regular tests.

The reply of the MHA did not address the specific issue raised by the Audit. Moreover, MHA did not devise any monitoring proforma in respect of quality checks on the construction of roads of INB.

### 5.1.3 Monitoring of the project

**Central Level:** Note for the Cabinet Committee on Security (September 2010) envisaged that the progress of the implementation will be reported to the Cabinet Secretariat on half yearly basis. The progress report, however, was submitted to Cabinet Secretariat only on two occasions, i.e. on 15 November 2018 and 30 October 2019. Nevertheless, Audit observed that the monitoring of the project was periodically done by MHA at various levels<sup>53</sup>. MHA stated (December 2020) that monitoring of the project is done regularly by MHA at various levels.

**State Level:** SGoUP order (May 1999) makes concerned Superintending Engineers (SEs) and Chief Engineers (CEs) responsible for quality control of the construction works being executed under their jurisdiction. Accordingly, the SEs and CEs are to inspect all works being executed under their jurisdiction once in six months and in a year, respectively.

---

<sup>53</sup> Review by the Hon'ble Home Minister, Steering Committee headed by Secretary (BM), review by Joint Secretary and physical inspection by the officers in Ministry.

The status of monitoring of works by CE and SEs during 2014-15 to 2019-20 (up to December 2019) is given in **Table No. 11**:

**Table No. 11: Monitoring of works by CE and SEs during 2014-20**

Authority	Inspections required	Inspections conducted	Shortfall
<b>CE</b>	56 inspections of 12 works	8 inspections of six works	86 per cent
<b>SEs</b>	124 inspections of 12 works	21 inspections of 12 works	83 per cent

Source: CE, SEs and the seven Divisions

As evident from the above table, there was a substantial shortage in the field inspections by the CE and SEs and in fact, six roads<sup>54</sup> in INB divisions Balrampur, Lakhimpur Kheri, Shravasti and Siddharthnagar remained uninspected by CE. This was not only against the orders but was also indicative of poor monitoring on the part of CE.

The SGoUP replied (January 2020) that inspections were carried out as far as possible and all officers have been instructed to inspect works as per norms. The fact remains that substantial shortfalls in inspections by CE and SEs possibly contributed to delays and questionable quality of construction.

---

<sup>54</sup> Construction of Kanchanpur Gandhelna Road (7.475 km), Paliaghat to Barsola Road (Gauriphanta to Chandan Chawki (30.950 km), Kakardhari to Tarsoma and Bharta-Gujjargauri Road (13.00 km), Jamunaha to Kakardhari (8.7200 km), Malgahiya Harbanshpur Road via Barhni Pakarhiwa Road (31.350 km) & Malgahiya Harbanshpur Road via Karamaini Ramnagar (28.900 km).