

SECOND REPORT
PUBLIC ACCOUNTS COMMITTEE
(1980-81)

(SEVENTH LOK SABHA)

D. C. ELECTRIC TRACTION

MINISTRY OF RAILWAYS

(RAILWAY BOARD)

**[Action taken on the recommendations of the Public
Accounts Committee contained in their 135th Report
(Sixth Lok Sabha)]**



सत्यमेव जयते

Presented in Lok Sabha on—

Laid in Rajya Sabha on—

LOK SABHA SECRETARIAT

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2nd Report of the Public Accounts Committee
(Seventh Lok Sabha) presented to Lok Sabha
on 23 December, 1980.

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(1980-81)

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2. Shri D. C. Pande—*Chief Financial Committee Officer*
3. Shri T. R. Ghai—*Senior Financial Committee Officer*

INTRODUCTION

I, the Chairman of the Public Accounts Committee, as authorised by the Committee, do present on their behalf this Second Report on action taken by the Government on the recommendations of the Public Accounts Committee contained in their Hundred and Thirty-Fifth Report (Sixth Lok Sabha) on D.C. Electric Traction relating to the Ministry of Railways. The 135th Report dealt with the (i) manufacture of D.C. Electric Locomotives (WCG-2) and (ii) acquisition and replacement of Mercury Arc Rectifiers. In this Action Taken Report, the Committee have desired that the Enquiry Committee constituted by the Railway Board to enquire into the acquisition and replacement of mercury arc rectifiers should finalise its report without further loss of time.

2. On 20 August, 1980 the following 'Action Taken Sub-Committee' was appointed to scrutinise the replies received from Government in pursuance of the recommendations made by the PAC in their earlier Reports:

- | | |
|---|------------------|
| 1. Shri Chandrajit Yadav— <i>Chairman</i> | |
| 2. Shri K. P. Unnikrishnan | } <i>Members</i> |
| 3. Shri K. P. Singh Deo | |
| 4. Shri V. N. Gadgil | |
| 5. Shri Satish Agarwal | |
| 6. Shri N. K. P. Salve | |

3. The Action Taken Sub-Committee of the Public Accounts Committee (1980-81) considered and adopted the Report at their sitting held on 2 December 1980. The Report was finally adopted by the Public Accounts Committee (1980-81) on 9 December, 1980.

4. For reference facility and convenience, the recommendations and observations of the Committee have been printed in thick type in the body of the Report, and have also been reproduced in a consolidated form in the Appendix to the Report.

5. The Committee place on record their appreciation of the assistance rendered to them in this matter by the office of the Comptroller and Auditor General of India.

NEW DELHI;
17 December, 1980.

26 Agraphayana, 1902 (S).

CHANDRAJIT YADAV,
Chairman,
Public Accounts Committee.

CHAPTER I

REPORT

1.1. This Report of the Committee deals with the action taken by Government on the recommendations and observations contained in their 135th Report (Sixth Lok Sabha) on paragraphs 9 and 10 of the Report of the Comptroller and Auditor General of India for the year 1975-76, Union Government (Railways) regarding D.C. Electric Traction which was presented to the Lok Sabha on 30 April, 1979.

1.2. Out of the 24 recommendations or observations contained in the Report Government have indicated the action taken or proposed to be taken by them in respect of all the recommendations.

1.3. The Action Taken Notes received from Government have been broadly categorised as follows:

(i) *Recommendations or observations which have been accepted by Government.*

S. Nos. 1, 2, 4, 5, 8 to 24.

(ii) *Recommendations or observations which the Committee do not desire to pursue in the light of the replies of Government:*

S. Nos. 3, 6 and 7.

(iii) *Recommendations or observations replies to which have not been accepted by the Committee and which require reiteration:*

Nil.

(iv) *Recommendations or observations in respect of which Government have furnished interim replies.*

Nil.

1.4. The Committee will now deal with the Action Taken by Government on some of their recommendations.

Lapses in acquisition/replacement of mercury arc rectifiers

[S. No. 24 (Paras 2.115 and 2.116)]

1.5. Pointing out certain instances of glaring lapses on the part of Railway Administration in the acquisition and replacement of

mercury arc rectifiers, the Committee had in paragraphs 2.115 and 2.116 of their 135th Report observed:—

“From the above facts the following serious lapses occurred in the case:—

- (i) Unjustified acquisition of mercury arc rectifiers for Lonavla at a capital of Rs. 35 lakhs.
- (ii) Installation of silicon rectifiers alongwith mercury arc rectifiers at Upper Bhole Ghat and Thull Ghat, which were technologically incompatible.
- (iii) Failure to cancel the order for mercury arc rectifiers of Lonavla, when it was known that mercury arc rectifiers had been technologically superseded, even though several opportunities offered themselves to do so on the failure of the supplier on many occasions to effect delivery by the stipulated dates.
- (iv) Now the mercury arc rectifiers will not be able to render service satisfactorily due to non-availability of spares.”

“The Committee desires that these lapses should be probed into by a high powered committee for the purpose of fixing responsibility.”

1.6. Replying to the above noted observations of the Committee, the Ministry of Railways in their letter dated 14-12-79 have stated:—

“As desired by the Public Accounts Committee in paras 2.115 2.116, the Ministry of Railways have since constituted a Committee comprising Adviser (Electrical), Adviser (Finance) and Director, Railway (Stores) of this Ministry on 26-6-1979 to investigate the lapses pointed out by the PAC. As soon as the Report is received, action taken notes on the various recommendations made by the PAC would be furnished to them.”

1.7. In a further communication dated 5 July 1980, the Ministry of Railways (Railway Board) have stated that the “enquiry under-

taken by the Enquiry Committee constituted by the Ministry of Railways is at the final stages.....”

1.8. The Committee note that the Ministry of Railways have constituted a departmental Committee on 26 June, 1979 comprising of Adviser (Electrical), Adviser (Finance) and Director, Railways (Stores) to investigate the lapses pointed out by the Committee regarding acquisition and replacement of mercury are rectifiers. They expect that the enquiry Committee would finalise its report without further loss of time so as to enable the Ministry of Railways to take appropriate action on its findings expeditiously.

CHAPTER II

RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation

Fifty Seven old D.C. Electric Locomotives (41 freight type and 16 passenger type) in use on Bombay-Igatpuri and Bombay-Pune sections of Central Railway procured during 1928-29 were due for replacement in 1963-64. The Railway Board decided in September, 1963 to replace them as they were "giving plenty of trouble; the design had become very old and transmission of traffic and maintenance had become a problem". According to the Chairman, Railway Board, the condition of these locomotives at that time (1963) when Railway Board started phasing them out was so bad that they could not carry on for 2-3 years more. To keep them going on, Railways had to spend Rs. 65 lakhs on their maintenance during 1965—67 alone. The Committee are informed that "in this case the Electrical Directorate had worked out as to when the locomotives would fall due for replacement. The action was initiated thereafter. The design was worked out in consultation with the Planning Committee, the Standards Committee and the RDSO." The Committee are distressed to note that in the instant case the Railway Board did not initiate action in advance to plan for the replacement of these old locomotives and waited for their attaining the codal life (i.e. 35 years). The Committee fail to understand as to why undue stress was laid on codal life alone when their condition was deteriorating and replacement policy was "on age-cum-condition basis". The absence of reasonable foresight as should normally be expected and the inaction on the part of Railway Board for not resorting to advance planning for replacement had led to direct and indirect avoidable losses to the Railways which cannot be fully quantified. The Committee feel prudence required that Railway Board should have initiated steps much earlier than September 1963 to finalise the design of new replacing locomotives. It was all the more necessary considering that the manufacture of locos is a very time consuming process. In the instant case the RDSO took a year and a half to issue key drawings. Then the Chittaranjan Locomotive Works took another year and a half to work out the working drawings. Then the order for long lead items and various raw materials and the manufacturing time took another

2 years or so. Thereafter the manufacturer wanted the prototype to be used and proved in service at least for three years. It had to get all the feed-back from the RDSO and to carry out necessary modifications. The Committee consider that all the modalities involved in the production of new locomotives were not carefully gone into while planning production of these locomotives keeping in view the urgent need for replacement of overaged and obsolete locos. The Committee hope that the Railway Board would learn a lesson from this.

[Sl. No. 1, Para 1.91 of 135th Report of P.A.C. (Sixth Lok Sabha)]

Action Taken

It may kindly be recalled that, when the 57 old DC electric locomotives were due replacement, indigenous manufacture of DC electric locomotives had not been established and both HEIL, Bhopal and Chittaranjan Locomotive Works were going through the preliminary stages in the establishment of manufacture of traction equipment, bogies, locomotive frames, etc., which are needed for the manufacture of locomotives. It was thus then considered necessary to keep the old locomotives going for another few years till the indigenously manufactured locomotives become available. Certain delays which have taken place in the planning for the replacement of these old locomotives, which have occurred, may kindly be viewed in this back-ground.

The Public Accounts Committee are assured that, due note of their valuable observations has been taken for future planning and production of rolling stock.

[Ministry of Railways O.M. No. 79-BC-PAC/VI/135 (1-9)
dated 27/29-12-79]

Recommendation

The Railway Board placed orders on Chittaranjan Locomotive Works for manufacture of 57 D.C. electric locomotives (WCG-2) during 1964—68. The design for the locomotives was finalised by the RDSO and made available to CLW in 1967. Three prototypes of the locomotives were manufactured in January, March and June 1971, and trial tests on them were conducted by Central Railway Administration in March, April and July 1971. The performance of these locomotives in ghat sections felt short of designed capabilities because of (i) the actual compensated gradients on the Kasaraghatpuri section being much severer than what had been assumed at the design stage, (ii) non-realisation of the anticipated running adhesion characteristics of the locomotives in the ghat sections with

combination of severe grades, curves, unfavourable track conditions, wet tunnel entrances etc. and (iii) the locomotive and train resistances being higher than standard values assumed in the design. Even though it had become known in the trials that the originally designed hauling capacity had not materialized, series production was undertaken without making study of the steps necessary to achieve the desired hauling capacity and carrying out necessary modifications. By the end of 1976-77, 57 locomotives had been produced at the cost of Rs. 17.78 crores. Besides the shortfall in their haulage capacity, these locomotives also turned out to be not suitable for banking services in the Ghat Section. As a result, five diesel electric locos costing Rs. 1.56 crores have been diverted from other sections for working as bankers on the Ghat Section. The additional running cost only on this account was Rs. 94 thousand during the years 1976-77 and 1977-78. This running cost would be a recurring expenditure.

[S. No. 2, Para 1.92 of 135th Report of P.A.C. (Sixth Lok Sabha)]

Action Taken

All the 57 WCG2 Locomotives are used for goods and banking services on Bombay Division of Central Railway. To meet shortfall between the requirement and availability of electric locomotives, 5 diesel Locomotives are used on South East Ghat Section to assist banking services. Acquisition of new Electric Banking Locomotive has been planned to replace working of diesel locomotives on this electrified section, and is being pursued vigorously.

[Ministry of Railways O.M. No. 79-BC-PAC/VI/135(1-9)
dated 27/29-12-79]

Recommendations

The Committee consider it a grave lapse that the assumptions made particularly with regard to severe grade and curves, unfavourable track conditions and wet tunnel entrances etc. proved erroneous. This was not new phenomenon and the RDSO should have with ordinary prudence known the critical working conditions in the Ghat Section. It is strange that the RDSO ventured into designing a new locomotive for Ghat sections without verifying and updating the data and without giving due consideration to the same. The lapse was compounded by a cynical disregard of the results of the trials. These deficiencies in the initial stage cost Railways heavily, though the exact quantification of the loss has not been furnished to the Committee by the Railway Board. It has altogether vitiated the financial

projection of the projected increase in line capacity with WCG2 Locomotives and necessitated an early laying of the third line involving heavy investment.

[Sl. No. 4, Para 1.94 of 135th Report of PAC (Sixth Lok Sabha)]

Action taken

This was a maiden effort by RDSO in developing a completely indigenous design of a DC Electric Locomotive. Since then, RDSO have carried out detailed instrumented trials and have collected valuable data. With the availability of this data there would be no possibility of repeating an error in projecting performance capability of any future design of DC electric locomotive.

[Ministry of Railways O.M. No. 79-BC-PAC|VI|135(1—9) dated
27/29-12-79]

Recommendation

The Committee are of the opinion that howsoever urgent the need of the new locomotives might have been to replace the old obsolete locomotives, production of faulty or inadequately equipped locomotives should not have been undertaken. This reflects poorly on the technical proficiency of the Engineering wing of the Central Railway and of the RDSO.

[Sl. No. 5, Para 1.95 of 135th Report of PAC (Sixth Lok Sabha)]

Action taken

The Board have decided that for the new DC Banking Locomotives, series manufacture should not be undertaken unless the Prototype Locomotives have undergone intensive service trials for at least 12 months to prove their operating performance and reliability under local conditions.

[Ministry of Railways O.M. No. 79-BC-PAC|VI|135(1—9) dated
27/29-12-79]

Recommendation

The Committee note that the average number of locomotives in service has increased substantially from 11.8 in 1972-73 to 50.83 in 1975-76 and the average number of locomotives effective (fit for use) has also increased from 6.03 in 1972-73 to 40.9 in 1975-76. However, the engine Kms. per day per locomotive in use (all services) had

declined from 189 in 1972-73 to 184 in 1975-76. The Committee further note that the target of engine kilometres per day per engine has not been prescribed for WCG-2 locomotives. However, in respect of D.C. locomotives (WCM, WCG and WCP etc.) the target laid down by the Railway Board in August 1972 was 200 Kms. per day. The Committee regret that the engine Kms. per day per WCG2 locomotive is much below than that of the D.C. locomotives and has declined over the years. The Committee would like to know the measures being taken by the Railway Board to check the declining average kilometerage of WCG 2 locomotives. The Committee would also like the Railway Board to lay down target kilometerage for WCG 2 locos.

[Sl. No. 8, Para 1.98 of 135th Report of PAC (Sixth Lok Sabha)]

Action taken

Implementation of various modifications on WCG2 locomotives is being speeded up to improve reliability and availability of WCG2 locomotives. A target of 200 Kms. per engine in use has been laid down for WCG2 locomotives.

[Ministry of Railways O.M. No. 79-BC-PPAC/VI/135 (1—9) dated 27/29-12-79]

Recommendation

The Committee note that the average cost of WCG 2 locomotives was estimated at Rs. 23.67 lakhs in 1969 and it was intimated to Railway Board in 1970. However, they observe that the cost of 3 locomotives manufactured in 1970-71 was Rs. 87.63 lakhs which comes to Rs. 29.21 lakhs per locomotive. The Committee are perturbed to note that the actual cost increased to the extent of Rs. 5.54 lakhs per locomotive during the period of one year. The Committee would like to know the reasons for such a wide variation in the estimated and actual cost of WCG 2 locomotives in such a short period.

[Sl. No. 9, Para 1.99 of 135th Report of PAC (Sixth Lok Sabha)]

Action taken

Reasons for variation in the estimated and actual cost of WCG2 Locomotives are:—

- (i) The increase in value of foreign exchange due to sudden increase in prices of the imported materials.
- (ii) Chittaranjan Locomotive Works had estimated the average cost of locos in 1969 but did not update the same while reporting these figures to Railway Board in 1970.

- (iii) The difference in estimated and actual loco costs was also due to increase in labour and material costs in India.
- (iv) Non-availability of reliable data on requirements of man-hours needed for the manufacture of Prototype Locomotives as CLW was undertaking for the first time manufacture of completely indigenous DC Electric Locomotives.

[Ministry of Railways O.M. No. 79-BC-PAC|VI|135(1—9) dated
27/29-12-79]

Recommendations

2.95. There has been inordinate delay in planning and executing replacement of the two rotary convertors at Lonavala. The Central Railway Administration decided in September 1962 to replace the then existing two rotary convertors of 2,500 KW capacity at Lonavala Sub-station by two mercury rectifiers of 3,000 KW capacity for the reasons that:—

- (i) the rotary convertors had exceeded their normal life of 25 years;
- (ii) they were often giving trouble due to wearing out of parts; spare parts were not available and the equipments had become obsolete;
- (iii) to augment the capacity of the converting plant; and
- (iv) to meet the power demands to cope with the anticipated increase in traffic during the Third Five Year Plan.

2.96. The detailed estimates of works were sanctioned by Central Railway Administration in 1968. Tenders were invited in March 1965 and the orders were placed in December 1967. Though supply and erection were stipulated to be by April 1970 according to the contract, the entire equipment was received at Lonavala only by early 1972. The equipment worth Rs. 35 lakhs had been idling since 1972, and its erection still remains to be completed.

2.97. The agreements for installation of mercury arc rectifiers at Lonavala, Upper Bhore Ghat and Thull Ghat were executed in December 1967, with completion dates as April, June and August 1970 respectively. However, within two months of the execution of the agreements the Railway Administration advised the firm in February 1968 to give priority for the completion of the work in the following order:

1. Upper Bhore Ghat.
2. Thull Ghat.
3. Lonavala.

2.98. The change in priority by which Lonavala sub-station was relegated from 1st position to 3rd position shortly after execution of the agreement suggests that the equipment worth Rs. 35 lakhs ordered for this work was not as urgently needed as originally contemplated.

2.99. Again the mercury rectifiers acquired for Lonavala were allowed to be cannibalised for carrying out the repairs to the mercury arc rectifiers installed at Upper Bhore Ghat and Thull Ghat. This further indicates that the acquisition of the mercury arc rectifiers for Lonavala was unnecessary.

2.100. The fact that replacement of the rotary convertors, though considered to be urgent in 1962, still remains to be undertaken even after a period of 16 years and the over-aged rotary convertors continue to be in operation and the mercury arc rectifiers acquired for replacement were allowed to be cannibalized, would lead to the inevitable conclusion that the whole project was conceived without relation to actual needs of the Railway.

2.101. There has been serious technical failure in providing silicon rectifiers at Upper Bhore Ghat and Thull Ghat sub-stations as second unit as 'stand by' (in addition to mercury arc rectifiers already installed there) since Silicon rectifiers are not designed to operate in parallel with the mercury arc rectifiers and thus augment the rectifier capacity, when required.

2.102. The Railway Board approved proposals in 1968 and 1969 for the installation of an additional rectifier of 3000 KW at Upper Bhore Ghat and Thull Ghat stations as second unit and also as 'stand by' to meet the additional requirement of power for traffic capacity during the Fourth Five Year Plan. Accordingly, the orders for supply and erection of two silicon rectifiers were placed on the National Government Electric Factory, Bangalore in October 1970 at a cost of Rs. 35.60 lakhs. However, in June 1973 the foreign collaborators of this firm indicated that the silicon rectifiers were not designed to operate in parallel with the mercury arc rectifiers already installed at the Ghat sub-stations in June 1972. It was this lapse which necessitated the proposal that four sets of mercury arc rectifiers (two already installed at the two Ghats in June 1972 and two awaiting installation at Lonavala) be ultimately diverted to Diva-Bassein Section which had been sanctioned four silicon rectifiers. (Incidentally the diversion of these sets to Diva-Bassein Section is no longer feasible). The Committee is unable to understand as to how the Railway Board

and the Railway Administration failed to see the technological incompatibility of the two types of rectifiers, while sanctioning the proposal in 1968-69.

2.103. The Committee was informed during evidence that one of the technical reasons for preferring the mercury arc rectifiers instead of silicon rectifiers was that the mercury arc rectifier can function as inverter while silicon rectifier was not capable of inverter function. But it is surprising to note that supplier of mercury arc rectifier confirmed in November 1974 that the equipment cannot satisfactory work in inverter mode and that they were to make a refund part of the amount on that account. This is another serious failure in not taking precaution in choosing the proper equipment resulting in the purpose for which the equipment was preferred, was not served.

2.104. There is evidence before the Committee to show that the Railway Administration was aware of the development of silicon rectifiers. Audit have informed the Committee that during the year 1965 tenders were invited by the Central Railway Administration for Upper Bhore Ghat, Thull Ghat II, Lonavala, Kalyan and Kurla for the supply of rectifiers. The type (whether mercury arc or silicon) was not indicated in the notice for tenders. In the case of tender for Kalyan, opened on 15-1-1966, all the 15 offers were for silicon rectifiers. Similarly, in respect of tenders for Kurla opened on 15-10-1965, the offers were mainly for silicon rectifiers. This leads to the conclusion that the Central Railway was in the know of the new technology of silicon rectifiers even at the time of entering into contract in December 1967 for erection of mercury arc rectifiers at Upper Bhore Ghat, Thull Ghat and Lonavala. The silicon rectifiers were also acceptable to the Railway, as they placed orders for Kalyan and Kurla in 1968.

2.105. The Railway had also positioned highly qualified senior officers with substantial establishment maintained in London, Bonn and Switzerland who were to advise the latest technological developments to them. The Railway Board obviously, had not taken advantage of their presence abroad to keep themselves abreast of these emerging technology of silicon rectifiers. The Committee, therefore, cannot appreciate why the Railway Administration preferred mercury arc rectifiers for Lonavala, and for Upper Bhore Ghat, and Thull Ghat.

2.106. Again it was open to the Railway Administration to have rescinded the contract for mercury arc rectifiers when the firm failed. In fact, the delivery dates were extended on three different

occasions without justification and on these occasions the contracts could have been terminated.

2.107. There have been inordinate delays both on the part of the firm in supply and erection of the equipment and on the part of the Railway in carrying out works preliminary to installation and erection of the equipment.

2.108. The contracts stipulated that the equipments would be delivered ex-works within 15 months from the date of approval of the contracts (by the Government of India and Swiss Confederation or the date of the receipt of the import licence whichever is later) which was 11th July, 1968 for Upper Bhore Ghat and Thull Ghat and 6th May, 1968 for Lonavala. However, the supplier did not ship the equipment by the stipulated dates. The first consignment of equipment was made only on 2nd November, 1970 from Rotterdam Port i.e., after delay of more than a year. The Committee do not at all appreciate the Railway Board's assertion that they "were looking upon the execution of the contract from start to finish and concerned themselves with the final completion of the contract without breaking-up the total period into shipment period, transit time and clearance." The Committee are of the view that if break-up of the time schedule as provided in the contract was not to be adhered to, there was no need of providing it in the contract.

2.109. Again, the Committee find that total completion time provided in the contracts was $23\frac{1}{2}$ months based on the following:

- (a) Delivery ex-work—15 months;
- (b) Shipment, Clearance Delivery at site—4 months;
- (c) Period for erection and Commissioning— $4\frac{1}{2}$ months.

2.110. However, the contractor failed to fulfill these delivery schedules. The equipments started arriving at site during and after February, 1971 though originally these should have been erected by April 1970, June 1970 and August 1970 in case of Lonavala, Upper Bhore Ghat and Thull Ghat sub-stations respectively.

2.111. The Committee further note that the contractor was granted extensions of time, as and when asked for and against the own interest of the Railway. This makes the conduct of the Railway Administration rather patently suspect since after the grant of first extension for supply of equipment was not completed by the contractor and Railway Administration benevolently agreed to second

and third extensions even though as per clause 18 of the three contracts, "time for completing work by the date or extended date for completion shall be deemed to be an essence of the contract."

2.112. From the evidence obtained by the Committee it is not clear whether there was any avoidable delay in shipment of the equipment. The Committee would like the Railway Board to investigate and report whether there was any delay on the part of the Railway Administration in moving the Shipping authorities to nominate the port of shipment and the carrier in time as per the stipulated shipment scheduled and if so the reason therefor.

2.113. Further, the contracts provide for damages @ $\frac{1}{2}$ per cent per week of delay in the completion period provided that the total damages for delay in the completion period would not exceed 5 per cent for FOB value of the contract plus erection price. However, no damages were claimed for delays of more than 24 months and 22 months for Upper Bhore Ghat and Thull Ghat Sub-stations work respectively. In the case of Lonavala sub-station delay is of more than 7 years and the contractor has backed out of his obligation to erect the equipment. It is ironical that the Railway Administration did not consider it appropriate to initiate any action against the contractor though they could, as Chairman, Railway Board had to admit during evidence "invoke the damage clause as well as the penalty clause in this contract."

2.114. Under the contracts for Upper Bhore Ghat and Thull Ghat sub-stations, the Railway Administration were required to complete certain items of work viz. construction of sub-station buildings including provision of approach road and retaining wall, laying of Railway siding, foundation for transformers, mercury arc rectifier tanks, control panels and high speed circuit breakers, provision of cable trenches, supply of switch yard structures etc. The completion of these items lagged for behind the original completion dates of these sub-stations, and were completed only during 1971. One of the reasons for delayed erection of Upper Bhore Ghat and Thull Ghat sub-stations was that the Central Railway failed to complete these works according to the schedule. The Committee are not satisfied with the explanation that delay in the finalising designs for RCC work and layout at site was due to hilly terrain and difficulty in transporting materials due to non-availability of approach road and also due to heavy monsoon. All these factors were not new to the Railway Administration and could have been well thought

of at the planning stage. The Chairman, Railway Board conceded during evidence that "it seems to be Railway's fault". He had agreed to investigate.

2.115. From the above facts the following serious lapses occurred in the case:—

- (i) Unjustified acquisition of mercury arc rectifiers for Lonavla at a capital of Rs. 35 lakhs.
- (ii) Installation of silicon rectifiers alongwith mercury arc rectifiers at Upper Bhoire Ghat and Thull Ghat, which were technologically incompatible.
- (iii) Failure to cancel the order for mercury arc rectifiers of Lonavla, when it was known that mercury arc rectifiers had been technologically superseded, even though several opportunities offered themselves to do so on the failure of the supplier on many occasions to effect delivery by the stipulated dates.
- (iv) Now the mercury arc rectifiers will not be able to render service satisfactorily due to non-availability of spares.

2.116. The Committee desires that these lapses should be probed into by a high powered committee for the purpose of fixing responsibility.

[S. Nos. 10 to 24, Para 2.95 to 2.116 of 135th Report of PAC 1978-79 (Sixth Lok Sabha)]

Action Taken

As desired by the Public Accounts Committee in paras 2.115-2.116, the Ministry of Railways have since constituted a Committee comprising Adviser (Electrical), Adviser (Finance) and Director, Railway (Stores) of this Ministry on 26-6-79 to investigate the lapses pointed out by the PAC. As soon as the Report is received, action taken notes on the various recommendations made by the PAC would be furnished to them.

[Ministry of Railways O.M. No. 79-BC/PAC/VI(135) (10—24)
dated 1-3-1980]

CHAPTER III

RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN THE LIGHT OF THE REPLIES OF GOVERNMENT

Recommendation

The designed haulage capacity of these locos was expected to give an increase of about 50 per cent in the line capacity for goods trains. But the actual performance fell short of the designed capacity, and as a result the expected increase in line capacity could not be generated with the introduction of these locos. The Railway Board did not give to the Committee any estimate of the extent of loss in the line capacity expected to be achieved. But the basic objective of increasing the line capacity was to avoid an increase in the number of trains to be run for coping with the additional traffic which in turn would necessitate a third line being laid which is a costly alternative because of the failure to achieve the requisite hauling capacity. The line capacity has to be increased by providing a third line on North East Ghat Section between Kasara and Igatpuri, and on South East Ghat Section between Karjat and Lonavla at the estimated cost of Rs. 17.50 and Rs. 21.74 crores respectively.

[Sl. No. 3, Para 1.93 of 135th Report of PAC (Sixth Lok Sabha)]

Action Taken

Provision of 3rd ghat line on North East and South East Sections will cater for future traffic projections taking into account that new banking locomotives will be available to bank up the ghats loads of 1830—2000 tonnes.

[Ministry of Railways O.M. No. 79-BC-PAC/VI/135(1-9) dated 27/29-12-79]

Recommendation

One of the reasons advanced for delay in production of locomotives was delayed supply of equipments by Bharat Heavy Electricals Ltd., Bhopal. The Committee find from the following table

that there was substantial delay on the part of Bharat Heavy Electricals Ltd., Bhopal in supplying the critical components and equipments.

Sl. No.	Equipments for	Promised by BHEL	Actual delivery	Delay in months
1.	1st Loco set	August 1968	Feb. 1970	18 months.
2.	2nd Loco set and onwards	January 1969 and at the rate of 2 loco sets per month onwards.	Sept. 1970 only one loco set.	20 months.
3.	27th Loco set	Feb. 1971	March 1973	25 months.
4.	57th Loco set	Feb. 1973	June 1976	40 months.

The Committee take a serious view of the abnormal delay which ranged between 18 to 40 months. They find it difficult to draw any consolation from the fact that since these equipments were being developed and manufactured by BHEL in that country for the first time, in collaboration with foreign firms, the former had difficulties in meeting the delivery schedule particularly when they (BHEL) were the pioneers in the manufacture of electric equipments and the process of manufacture of the type of equipment required were not entirely new to them. Moreover, they had the advantage of foreign collaboration in this regard. The Committee would like to be re-assured that the reasons for delay have been identified for taking remedial measures for future.

[Sl. No. 6, Para 1.96 of 135th Report of PAC (Sixth Lok Sabha)]

Action Taken

The observation/recommendation contained in this para relates to the delays in the supply of traction equipment by BHEL to CLW. Relevant extracts have, therefore, been sent vide this Ministry's Office Memorandum No. 79-BC-PAC/VI/135(1-9) dated 18-5-1979 to the Ministry of Heavy Industry under advice to Lok Sabha Secretariat and Ministry of Finance (Deptt. of Expenditure-Monitoring Cell). The Ministry of Heavy Industry have been requested to send "the Action taken note" direct to Lok Sabha Secretariat.

[Ministry of Railways O.M. No. 79-BC-PAC/VI/135(1-9)
dated 27/29-12-79]

Action taken by the Department of Heavy Industry

The Manufacture of electrics for 1500V DC locomotives type WCG-22 was taken up for the first time in the country by BHEL. The special features included a new design of traction motors, motor alternator system for 3-phase power supply to the loco auxiliaries—a new innovation for DC locos—a micro master controller for tractive effort control during start. The master controller required in the control system is of a very intricate and sophisticated design. All these new developments took considerable time originally with BHEL's foreign collaborators viz. M/s. AEI of UK, and hence, the subsequent delay in manufacture at BHEL works.

In addition, the RDSO wanted BHEL to carry out exhaustive tests on the first three prototype locomotives, which in turn delayed the manufacture of subsequent supplies.

Thus, all the factors which led to delay in supply of electrics have been identified. The valuable experience gained by BHEL in the past has helped in the indigenous development of many sophisticated electrical items needed by the Railways. This has also enabled BHEL to give more realistic delivery schedules. Government hope that such delays and consequent inconvenience to the customers and the public will be avoided in future.

[Ministry of Industry, Deptt. of Heavy Industry, O.M. No. 5(11)/79-HEM dated 7-8-1980]

Recommendation

The Committee note that no penal charges have been recovered from Bharat Heavy Electricals (I) Ltd. for not maintaining the delivery schedule of traction motor equipments. It has been stated that "the terms and conditions governing the contract with BHEL do not provide for this." The Committee are perturbed to note as to how such an important clause has been left out of the contract resulting in delayed supplies of vital equipments and consequential heavy losses to the Railways. The Committee would like the Railway Board to investigate into the matter to find out why penalty clause for any delay in delivery of equipment by the BHEL was not provided for in the terms and conditions of the contract.

[Sl. No. 7, Para 1.97 of 135th Report of PAC (Sixth Lok Sabha)]

Action Taken

Ministry of Railways have been trying for quite some time to include a Clause of liquidated damages in the terms and conditions governing the contracts with BHEL. BHEL have not so far agreed to the inclusion of liquidated damages clause. This is being pursued with BHEL. However, the suppliers had agreed not to claim escalation in costs in respect of wages and materials during the extended delivery periods.

[Ministry of Railways O.M. No. 79-BC-PAC/VI/135(1-9)
dated 27/29-12-79]

CHAPTER IV

**RECOMMENDATIONS/OBSERVATIONS REPLIES TO WHICH
HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND
WHICH REQUIRE REITERATION**

—NIL—

CHAPTER V

**RECOMMENDATIONS/OBSERVATIONS REPLIES TO WHICH
GOVERNMENT HAVE FURNISHED INTERIM REPLIES**

—NIL—

NEW DELHI;
December 9, 1980.

Agrahayana 18, 1902 (S).

CHANDRAJIT YADAV,
Chairman,
Public Accounts Committee.

APPENDIX

Conclusions/Recommendations

Sl. No.	Para No.	Ministry/ Deptt. concerned	Recommendations
1	2	3	4
1	1.8	Railways	The Committee note that the Ministry of Railways have constituted a departmental Committee on 26 June, 1979 comprising of Adviser (Electrical), Adviser (Finance) and Director, Railways (Stores) to investigate the lapses pointed out by the Committee regarding acquisition and replacement of mercury arc rectifiers. They expect that the enquiry Committee would finalise its report without further loss of time so as to enable the Ministry of Railways to take appropriate action on its findings expeditiously.