

INFRUCTUOUS EXPENDITURE  
ON PURCHASE OF WATER COOLERS  
AND FILTERS

MINISTRY OF RAILWAYS  
(RAILWAY BOARD)

**PUBLIC ACCOUNTS  
COMMITTEE  
1997-98**

**ELEVENTH LOK SABHA**

**TWENTY-THIRD REPORT  
PUBLIC ACCOUNTS COMMITTEE  
(1997-98)**

**(ELEVENTH LOK SABHA)**

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(RAILWAY BOARD)**



*Presented to Lok Sabha on 20.11.1997  
Laid in Rajya Sabha on.....*

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COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE  
(1997-98)

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\*Expired on 24 May, 1997

\*\*Ceased to be member of the Committee on her appointment as Minister of State w.e.f. 3.6.1997.

## INTRODUCTION

I, the Chairman of the Public Accounts Committee having been authorised by the Committee, do present on their behalf, this Twenty-Third Report on Paragraph 4.3.1 of the Report of the Comptroller & Auditor General of India for the year ended 31 March, 1995, No. 10 of 1996, Union Government (Railways) relating to "Infructuous expenditure on purchase of water coolers and filters."

2. The Report of the C&AG for the year ended 31 March, 1995 (No. 10 of 1996), Union Government (Railways) was laid on the Table of the House on 26 July, 1996.

3. The Committee took evidence of the representatives of the Ministry of Railways (Railway Board) on the subject at their sitting held on 6 June, 1997. The Committee considered and finalised this Report at their sittings held on 13 and 18 November, 1997. Minutes of the sittings form Part-II of the Report.

4. For facility of reference and convenience, the observations and recommendations 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 Appendix-V to the Report.

5. The Committee would like to express their thanks to the Officers of the Ministry of Railways (Railway Board) for the cooperation extended by them in furnishing information and tendering evidence before the Committee.

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

NEW DELHI;  
18 November, 1997

DR. MURLI MANOHAR JOSHI,  
Chairman,

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27 Kartika, 1919 (Saka)

Public Accounts Committee.

## REPORT

### INFRACTUOUS EXPENDITURE ON PURCHASE OF WATER COOLERS AND FILTERS

#### I. Audit Paragraph

This Report is based on paragraph 4.3.1 of report of the Comptroller and Auditor General of India for the year ended 31 March 1995, No. 10 of 1996, Union Government (Railways) relating to "Infructuous expenditure on purchase of water coolers and filters" which is reproduced at Appendix-I to this Report. The Audit paragraph brings out that the Railway Board decided in August 1987 to provide water coolers in coaches with a view to supplying cool drinking water to the travelling public. However, the scheme was abandoned five years later due to injudicious decision of the Railway Board to procure contested and defective equipment from a private firm at a higher cost. Consequently, the expenditure on 620 "Split unit Design Water Cooler" (SUDWC) and 300 Zero-B filters amounting to Rs. 1.84 crores proved infructuous.

2. The various aspects arising out of examination of the audit paragraph by the Committee are dealt with in the succeeding sections.

#### II. Scheme for fitment of water coolers in coaches

##### A. Introductory

3. According to the information made available to the Committee by the Ministry of Railways, the Passenger Amenities Committee in their report of 1985 had recommended fitment of water coolers in air conditioned (AC) coaches. Based on that, the Railway Board decided in August 1987 that water coolers should be provided at least in AC coaches of superfast trains having halts spaced at several hours' interval. Accordingly, the Railway Board asked Integral Coach Factory (ICF), Perambur on 12 August 1987 to develop a suitable system for providing water coolers for AC coaches. The Committee have been informed that after a number of experiments, ICF turned out one AC two tier coach on 2 June 1988 fitted with 4 litre capacity ICF made water cooler operating on an open type compressor driven by DC motor. In order to ensure unrestricted water flow, ICF was also stated to have subsequently developed a 10 litre capacity water cooler which was fixed with Richardson Cruddors Compressor being manufactured in collaboration with Frigidenire, USA. ICF also turned out another AC two-tier coach on 22 July 1988 fitted with an inverter developed by ICF and commercially available Voltas make sealed unit type 40 litres per hour capacity water cooler which was fitted with M/s. Shriram Refrigerators make sealed unit.

4. The progress of fitment of water coolers was reviewed by the Railway Board at the highest level in August 1988 and the Research Design and Standards Organisation (RDSO) was asked to coordinate with Production Units and Zonal Railways on the issues of (a) development of suitable inverter; (b) development of a suitable filter; (c) resolve all outstanding technical problems; and (d) development of 3KW alternator for MG coaches. According to the Ministry of Railways, the Railway Board had assigned top priority to the work and set a target of March 1989 for resolving all technical problems so that all new coaches and existing rakes could be fitted with water coolers.

**B. Offer from a Private Firm for SUDWC**

5. According to the Ministry of Railways, a private firm Greysham & Company of New Delhi had been trying to develop a water cooler for passenger coaches and had approached Railway Board in November 1988 for electric motor type water cooler.

6. During the course of their examination, the Committee came across certain documents in the file of Railway Board which indicated that this matter was considered in the Board at the level of Members — Mechanical and Electrical. A letter was also subsequently issued by Executive Director (Dev.) on 4 January 1989 to the General Manager, Western Railway *iner-alia* directing placement of the trial order on the aforesaid firm for one such water cooler by 28 February 1989. The copies of this letter were also endorsed to General Manager of ICF for information and to Director General, RDSO for providing assistance to Western Railway, if required by them.

7. During evidence, the Committee enquired whether this particular electric motor type water cooler offered by M/s. Greysham & Co. was tried by the Railways. In his reply, the Chairman, Railway Board stated:

“It was never tried. They never tried it. It required an inverter.”

8. In their written note to the Committee, the Ministry of Railways also stated that since a suitable inverter had not been developed for this type of water coolers, the firm developed a split unit design water cooler without the electric motor and approached Railway Board on 20 January 1989 for permission to carry out its trial on one coach.

9. In reply to a specific question about the manner in which SUDWC developed by the private firm was different from the water coolers under experiment by ICF at that time, the Ministry of Railways stated in their note that the condenser and compressor of SUDWC were underframe mounted and the compressor was driven by V-belts taking drive from the extension of the existing alternator pulley. In this arrangement, the electric motor to drive the compressor was not required as the drive was taken from the movement of the axle *via* alternate pulley.

10. The Committee desired to know during evidence whether the private firm had ever dealt with this type of cooler or such type of



equipment in the past. The representative of Railway Board stated in his reply:

“M/s. Greysham & Co. has been supplying to the Railways air brake equipment for quite some time. Before, that, they were also supplying vaccum brake equipment. About this time, they came into the market for a variety of household appliances including washing machine, referigerators etc.”

### C. Consideration of the offer for trial of SUDWC

11. The Audit have pointed out that while the trials of specially developed water coolers were undertaken in line with the original proposal of the scheme, the experiment on SUDWC was separately intrusted to the Northern Railway without coordination with RDSO and ICF.

12. In reply to a question regarding the consideration which prompted the Railway Board to separately entrust the experiment on SUDWC to the Northern Railway without coordination with RDSO and ICF, the Ministry in their note stated:

“The progress of development of water cooler was reviewed at the highest level in Railway Board in February 1989. It was observed that the development of water cooler was taking very long. One of the main reasons was that a suitable inverter had not been developed by then. Therefore, to expedite matters, Board decided that development of SUDWC should be urgently taken up and to cut out coordination delays, this work was entrusted to Northern Railway with close monitoring by Railway Board.”

13. In this context, it is relevant to point out that the private firm Greysham & Company in their letter of 20 January 1989 had specifically shown their interest in getting the SUDWC installed in one of the coaches at Northern Railway and had requested the Member (Mechanical) in the Railway Board to advise the concerned officer incharge to arrange for its installation in a coach at New Delhi and to monitor its performance.

14. The Committee's scrutiny of the internal noting of the Ministry of Railways in this regard brought out that a status note on provision of water coolers in trains was put up to Minister of State (Railways) by Member (Mechanical) on 7.2.1989. While submitting the same, the Member (Mechanical) had, *inter-alia*, recorded the following note:

“Separately, we are considering a split unit design of water cooler, the compressor of which will be fitted on the underframe and driven by the flat belting arrangement. This arrangement is capable of providing a cheaper alternate but will not work when the train is stationary.....”.

15. After having subsequently discussed and explained the above position, the Member (Mechanical) further recorded the following notings on 23.2.1989:

....I have already spoken to Addl. G.M. and CME/N. Rly. to have this matter pursued with the party who have suggested this arrangement. EDME (RS) may monitor this vigorously to arrive at a final arrangement early, if possible."

16. Taking note of the fact that the private firm had given a proposal directly to Member (Mechanical) in the Railway Board for trial of SUDWC developed by them, the Committee enquired about the system in vogue in the Board for scrutiny of such proposals. In his reply, the Chairman, Railway Board stated during evidence:

"If such an offer comes, it is examined technically. The firm's past experience in the field is also examined."

17. On being asked whether any technical examination of the proposal was conducted at the Board's level before ordering trial of SUDWC in the instant case, the Chairman, Railway Board\* deposed:

"Records do not show any investigations having been done in regard to the capability of the firm for manufacturing refrigeration equipment."

18. During evidence, the Committee also enquired whether the private firm had actually produced the SUDWC at the time when request was made to Railway Board to put it on trial. In his reply, the representative of the Railway Board deposed:

"It was not given. It was made and given later."

#### **D. Results of initial service trials of SUDWC**

19. The first service trials of SUDWC was conducted by the Mechanical Department of Northern Railway on 3 May 1989.

20. In the context of this trial, Executive Director (Dev.) in the Railway Board recorded *inter-alia* the following note on 4.5.1989:

"2. The said arrangement was fitted on Coach No. 12506-NR GSCN and was sent for preliminary trial by 305 UP of 3.5.1989 upto Meerut. The preliminary adjustment for tension of pulley belt and freon gas were carried out by the Company's representative between Delhi and Modinagar stations and water cooler started functioning only after Modinagar. The cooling effect to the level of about 10 C (31 to 21 C) was observed within a run of about 15 kms. at a speed of about 30 to 40 kms. On its return journey, the coach was attached to 372 Dn. passenger train, but only after 3 minutes the belt of the coach gave way and the trial was abandoned.

3. The matter was discussed with CME/Northern Railway and Sr. DME/Delhi Division. According to CME/Northern Railway, this arrangement does not have the potential for success. The drive from the existing pulley is likely to continue to be the weakest sport in the system. The Company's representatives were also contacted.

Shri Mohan Singh of Greysam & Company stated that the firm was prepared to provide a separate pulley and belt arrangement for driving the compressor. CME/Northern Railway has, however, strong reservation about the proposed arrangement."

21. According to the information furnished to the Committee, field trials were again conducted from 25.5.1989 to 1.6.1989 with the same Coach attached to Shan-E-Punjab and these trials were considered successful. In this context, an extract from the note recorded on 13.6.1989 by the ED (Dev.) is reproduced below:

"..... In view of the encouraging result, it is suggested that a limited application of these water coolers be made to have a break through in the direction. The best alternative is to have the application of these water coolers on day trains so that efficacy of the system can be fully tested. Passenger trains where there water coolers should be identified. To begin with, we may select trains working on Northern and covering Central India. This would enable the Railways to try out these coolers under the most arduous conditions. In order to ensure that the firm is interested in developing this item, it is suggested that quantity capable of sustaining their interest in its development should be ordered on them. The firm, vide their letter at S.No. 17, have requested for an order of minimum quantity of 5000 nos. water coolers so that they can organise their production smoothly....."

### III. Procurement of SUDWC

#### A. Decision of June 1989 to procure 60 SUDWC

22. The Committee have been informed that Railway Board decided to procure 60 SUDWC in June 1989 only after Northern Railway had found the field performance of one water cooler satisfactory during field trials from 25 May to 1 June 1989. According to the Ministry, the progress of development of a suitable water cooler for self-generating coaches was very slow and the Railway Board, therefore, as a parallel action decided to procure 60 SUDWC.

23. The Committee have also been informed that in view of the encouraging results of field trials of SUDWC, the Board ordered extended field trials on rakes operating out of Delhi having substantially long day-time operations. Shan-e-Punjab and Malwa Express trains were identified for fitment of SUDWC for extended trails.

24. A perusal of the relevant file of the Railway Board on this subject revealed that taking 10 per cent spare for efficient up-keep of the water coolers and change of coaches, the initial requirement of 60 water coolers was worked out by the Board for fitment on Shan-e-Punjab and Malwa Express Rakes.

25. Executive Director (Dev.) proposed for approval of tender enquiry papers on 29.6.1989 for procurement of 60 numbers of water cooler from M/s. Greysam & Company.

26. The proposal of the Executive Director (Dev.) was considered and approved on 3.7.1989 by the then Advisor (Finance) in the Railway Board who also made the following observations in this regard:

“The same subject is also being dealt with in the Elec. Engg. Directorate and ML had put up a note to MOS(R) in August, 1988. The two approaches need to be coordinated.

ICF is also carrying out a similar study on six coaches. The first of which was handed over to Southern Railway in May, 1989. The result of this study also have to be taken into account before a final decision is taken on the type to be standardised. As indicated by E.D. (Dev.) at p.3/N, RDSO may be entrusted with the development of the final design for adoption.....”

27. During the course of examination of this subject, the Committee also enquired whether the Railway Board undertook any comparison between the water coolers under experiment with ICF and the SUDWC offered by the private firm before deciding in June, 1989 to procure 60 units of SUDWC. The Ministry of Railway in their note stated that the comparative performance evaluation of SUDWC and ICF fitted water coolers was not done as ICF had by then fitted only two water coolers — one of which was sealed unit type and the SUDWC was being introduced on Indian Railways for the first time and its past performance was not available.

#### **B. Invitation of Quotations**

28. In pursuance of the approval conveyed by the then Advisor (Finance) on 3.7.1989, the then Executive Director (Dev.) in the Railway Board in his note dated 4.7.1989 directed that the tender inquiry might be floated. Accordingly, the following note was submitted by the officials concerned to the Executive Director (Dev.):

“As approved by the Board (Advisor-Finance and MM) a fair letter of tender inquiry addressed to M/s. Greysam & Company, Delhi, inviting quotations for supply of 60 numbers of water coolers indicating last date of receipt of tender by 1430 hrs. on 6.7.1989 and opening the same by 1500 hrs. On 6.7.1989 is placed below for signature please.”

Sd/-  
(Illegible)  
4.7.1989

Sd/-  
(Illegible)  
4.7.1989

Sd/-  
E.D. (Dev.)  
4.7.1989

29. During evidence the Committee scrutinised aforesaid note in the original file (No. 88/Dev. Cell/IGRI/20) and observed that while the first two signatures on the note were initially dated 6.7.1989, the dates were subsequently superscribed as 4.7.1989 at both the places. Considering the fact that the tenders in the instant case were to be obtained and opened on

6.7.1989 itself, the Committee inquired whether the dates of recording the note by the official were deliberately changed. In his deposition the Chairman, Railway Board stated:

“We can inquire into this aspect. I have not seen it from this angle.”

30. In reply to a related question as to what inference could be drawn from this change of date, the Chairman, Railway Board stated:

“The other inference which might be possible is that they (the official) saw the dates by mistake as 6.7.1989.”

31. On being inquired whether the two persons could commit the same mistake, the Chairman, Railway Board deposed:

“Yes, sir”.

### C. Price of SUDWC

32. According to the Audit paragraph, the price of Rs. 25,000 per unit demanded by the firm was accepted with only marginal adjustments without insisting upon break-up for analysis and reasonableness on the plea that it was a new equipment and not comparable with those on trial by ICF which cost between Rs. 25,000 and 30,000. According to the Audit, SUDWC did not have motors unlike ICF developed proto types and therefore, the price of Rs. 25,000 per unit was *prima facie* excessive.

33. In their note to the Committee, the Ministry of Railways stated that the firm did not furnish the price break-up. However, the Tender Committee arrived at the reasonableness of the rates by comparing quoted rates with those of water coolers procured by ICF. Since the price of open type water cooler procured by ICF was Rs. 30,600 plus taxes, the Tender Committee was of considered view that the rates of Rs. 27,000 for flat belt driven dynamo meter and Rs. 28,500 for V-belt dynamo meter was reasonable. The Ministry further stated that SUDWC was being procured by the Indian Railways for the first time and no previous rates were available for comparison. Though SUDWC did not have electric-motor to drive the compressor, it required pulleys and V-belt. According to the Ministry, this system had much bigger stainless steel storage tank (150 litre capacity as against 40 litre capacity of other water coolers). This system was also stated to have an electrical clutch not provided on electrical systems. Copper/seamless piping in SUDWC were also stated to be much longer compared to other designs. The Ministry also stated that keeping these in view, the price paid to the private firm was considered reasonable as it was comparable to that paid by ICF for other types of compressor minus, the cost of motor which at that time did not cost more than Rs. 1000/- to Rs. 1200/-.

#### D. Enhancement of Order

34. The audit paragraph highlights that before any concrete conclusion was drawn from the trial runs the Board placed orders to procure 60 SUDWC on 13 July 1989 and enhanced the quantity to 320 on 26 July 1989.

35. On being enquired about the precise reasons which led the Railway Board to increase the number of SUDWC to 320 units within only 13 days of the first order, the Ministry of Railways in their note stated as follows:

“The then MOS(R) in a note to CRB and MM wanted to know the reasons for ordering only 60 water coolers against his instructions of 400 in number. He further ordered that the additional quantity to cover 60 prominent trains should be issued within 7 days and compliance reported to him. The Board, therefore, increased the quantity to 320 numbers with the provision that the firm will supply 60 water coolers at the first instance and the balance 260 numbers will be supplied after 6 to 8 weeks of satisfactory service experience of the first lot of 60”.

36. The Committee's examination of the relevant file of the Railway Board revealed that the MOS(R)'s note dated 17.7.1989 on the fitment of water coolers in coaches was dealt with by the Member Mechanical who recorded the following note on 21.7.1989:

“The matter of fitment of water coolers at an accelerated pace was discussed with F.C. on 19.07.1989. It was the original intention that in order to provide for a more broad based usage of the water coolers, we should place a developmental order of substantial quantity. Keeping in consideration the developmental nature, which may require close monitoring and perhaps occasional adjustments as necessary, it would be prudent to contain the initial application on coaches which are maintained at one Coaching Maintenance Depot. Since the earlier developmental work has been done at Delhi Coaching Depot, it would be appropriate if coaches/rakes operating out of Delhi and having substantial day time running are considered for fitment presently.

Accordingly, details of rakes operating out of Delhi were collected and the requirement of water coolers were worked out to a figure of 320 Nos. including some spares. It is intended that developmental order for this number be placed on the firm with the proviso that the bulk delivery will follow successful operation on the Shan-e-Punjab and Malwa Express rakes over a period of a few weeks. The fitment

of the entire number is expected to be completed well before December, 1989, as directed by MOS(R). Since this number is short of 400 coaches, as per directive of MOS(R), MOS(R) may kindly see and approve above course of action."

Sd/-  
MOS(R)

Sd./-  
M.M.

37. The Committee have also been informed by the Ministry of Railways that Para 2 of their purchase order dated 26.7.1989 stipulated that "260 Nos. water coolers will be supplied only after the successful trial of 60 Nos. water coolers ordered on the firm earlier for a period of 6 to 8 weeks."

#### **E. Inspection of the equipment**

38. According to the Audit Paragraph, the Railway Board assigned the inspection of equipment to Northern Railway and did not associate either RDSO or ICF. The inspection was assigned to the authorities of the Mechanical Department and the Electrical Department was not associated.

39. In their note furnished to the Committee, the Ministry of Railways stated that the SUDWC type water cooler was ordered by Mechanical Department and did not contain any electrical equipment. Therefore, assigning the inspections to Mechanical Department of Northern Railway was in accordance with the laid down procedure.

40. The Committee's scrutiny of the internal notings in the file of the Railway Board revealed that the Tender Committee constituted for evaluation of offer of M/s. Greysan & Company had recommended that "Inspection of the water coolers shall be carried out by DG/RDSO or his authorised representatives". However, this recommendation of the Tender Committee was subsequently modified by the Executive Director (Dev.) as under:

"The fitment of split unit design type water cooler has been mainly coordinated by CME, Northern Railway under the direction of the Board from the very beginning. As such, it would be befitting for the same authority (CME-N.Rly.) or his authorised representative to be nominated as the inspecting authority. Guidance, if required, from RDSO, can be sought."

41. The Committee have also been informed that the first lot of 10 SUDWC was inspected and passed at firm's premises on 18.8.1989 and the last lot to complete 60 water coolers was inspected and passed at firm's premises on 29.9.1989.

#### **F. Inadequate trials of first lot of SUDWC**

42. As has already been brought out earlier in this Report, additional supply of 260 SUDWC was to be undertaken by the Railways only after successful trial of initial lot of 60 SUDWC for a period of 6 to 8 weeks.

43. It is however, seen from the information made available by the Ministry of Railways that out of 60 SUDWC, seven units were installed by August, 1989, 27 in September 1989 and 25 in October 1989.

44. Considering the fact that the last consignment of SUDWC was received in October 1989 and the Railway Board had issued clearance on 21 November 1989 for supply of additional quantity of 260 SUDWC. The Committee enquired whether the whole lot of 60 SUDWC was put to trials for 6 to 8 weeks as stipulated. In his reply, the Chairman, Railway Board deposed:

“For 60 coolers, obviously, the trials took place in one month.”

In reply to another related question, the witness stated:

“46 coolers were used by September. On 2nd November, we had a report from the Northern Railway, according to which, the efficiency rate was around 87 per cent.”

45. The Committee's scrutiny revealed that the performance report furnished by the Chief Rolling Stock Engineer of Northern Railway on 2 November, 1989 related to the period ending 31 October, 1989 and contained performance report by 57 water coolers put into service by 31 October, 1989.

46. According to the Audit paragraph, Northern Railway also apprised the Railway Board the results of 10 day performance from 1 to 10 November, 1989 in respect of all 60 water coolers and claimed 95 per cent success rate. In this context, the following note recorded by the then Executive Director (Dev.) on 16.11.1989 in the relevant file of the Railway Board is pertinent:

“...All the 60 water coolers supplied by the firm have since been fitted. Northern Railway has submitted the performance of these 60 units from 1.11.1989 (S.No. 64) in continuation of their earlier report (S. No. 63). From the perusal of both these 111 reports it is evident that the overall performance of the water coolers in service has now established at an operating efficiency level of 95%. This is acceptable level of performance and has got the potential of showing a further improvement.

From the perusal of the service performance of these water coolers it is evident they have been in service for an average cycle of about 7 weeks. Condition provided in the contract service experience of about 6 to 8 weeks was indicated.

In view of above it is requested that the firm may now be permitted to supply the balance of 260 Nos. of water coolers as per amendment No. 1 (Sl. No. 32).

Sd./-  
E.D.(Dev.)  
16.11.1989



### G. Initial Findings of RDSO

47. According to the information furnished by the Ministry of Railways, a proposal to study SUDWC was sent on 4 August, 1989 to RDSO which was asked to (a) evaluate performance of water coolers already put in service by ICF and also SUDWC; and (b) develop a final design of water cooler for adoption on all coaches.

48. The Audit paragraph highlights that RDSO pointed out in September 1989 to Northern Railway, with copy to the Board, certain design and operational problems in SUDWC and advised discontinuance of further procurement till these were satisfactorily resolved. According to the Audit, the Railway Board overruled the advise of RDSO to discontinue provision of mechanical water cooler in the trains till satisfactory solutions were found to the design and operational problems and went ahead with procurement of additional 260 units although the Board was aware of the defects in design and installation and the equipment had not been in service long enough for a definite opinion about its reliability and efficiency.

49. During evidence, the Committee pointed out that findings of RDSO in September 1989 clearly implied that RDSO had not accepted the concept of mechanical water cooler and enquired as to why the Railway Board still placed order for supply of additional supplies of SUDWC in November 1989. In his reply, the Chairman, Railway Board stated:

“I would like to place before the Chairman the letter of RDSO which says that the trial should continue and should be watched.”

He also added:

“What I am saying is that the RDSO had at no point of time told the Railway Board that the trial should be discontinued....”

50. In this context, the Committee drew attention to a particular letter dated 14-15 September 1989 from Mr. A.K. Rawal, for Director General (Elec.) in the RDSO addressed to the General Manager (Electrical), Northern Railway with a copy endorsed to Secretary (Elect.) in the Railway Board, in which various drawbacks in mechanical water cooler were pointed out. The last paragraph of this letter available in the file of Northern Railway Headquarters, read as under:

“In view of the above, it is advised that the provision of the mechanical water cooler should be discontinued till a satisfactory solution is found to the problems mentioned above.”

Reacting to the above, the Chairman, Railway Board deposed:

“A copy of that letter was also endorsed to the Board, I will read out the same letter from the original RDSO file.” It says:

“In view of the above, it is advised that the provision of mechanical water cooler should be watched and feed back sent to RDSO so that a satisfactory solution is found to the problems mentioned above.”

51. In the context of the two different versions of the same letter in the files of General Manager, Northern Railway and RDSO, the Chairman, Railway Board stated during evidence:

“It is a very serious matter. I myself went into detail. We are ordering an enquiry into this. The entire thrust of the Audit, if I may sum up in one sentence is, ‘when the RDSO asked the Board to discontinue why did the Board progress with it?’ I would say that the *raison d’etre* of the entire audit paragraph is this letter of RDSO written to the General Manager, Northern Railway. The copy of the letter endorsed to the Board, asked for the trial to continue...”

The copies of the aforesaid two versions of the RDSO letter dated 14-15 September 1989 as extracted from the files of Northern Railway Headquarters and RDSO are reproduced at Appendices-II and III to this Report.

52. The Committee’s examination of the internal notings in the files of the Railway Board also revealed that the latter version of the RDSO letter dated 14-15 September 1989 was available in the files of the Railway Board and the same was dealt with by the then Executive Director (Dev.) who had recorded the following note in this regard on 17 November 1989:

“Discussed with EDF (S). It was brought out by him that cognisance should be taken care of the RDSO’s letter at S. No. 66\*. The coaches are maintained on an integrated basis. Northern Railway has maintained a detailed analysis of the defects. None of the defects is mentioned therein, figure in the detailed analysis as appearing in S.Nos. 63\*\* and 64\*\*\*. The increase in the load of the bearing can be said to be only marginal and no slippings whatsoever of the belts have taken place. There were certain few cases in the beginning, but towards the later fitments, these also disappeared. The results do not predict any nature of defects as projected by RDSO”.

The aforesaid note was also seen by EDFS in the Railway Board who *inter alia* made the following remarks:

“Considering the overall performance of the initial batch of 60 Nos. water cooler, which was certified as satisfactory by Northern Railway and ED (Dev.) above, the firm may now be permitted to manufacture and supply the balance order quantity...”

The Committee’s scrutiny of the file of Northern Railway Headquarters (Ref. No. 62-Elect/1/TL/BG IV) however, revealed that Chief Electrical Services Engineer had agreed with the various points raised by the RDSO in their letter dated 14-15 September, 1989 and apprised RDSO of the same vide his letter dated 4 October, 1989, a copy of which was also

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\* RDSO letter dated 14-15 September 1989.

\*\* Analysis report on performance of water coolers put into service upto 31.10.89 as furnished by Northern Railway on 2.11.1989.

\*\*\* 10 days performance report for the period 1 to 10 November 1989 furnished by Chief Rolling Stock Engineer in Northern Railway on 10 November 1989.

endorsed to the Secretary (Electrical) in the Railway Board. The copy of this letter is reproduced at Appendix-IV to this Report.

#### **H. Subsequent findings of RDSO and placement of further order**

53. The Audit paragraph also brings out that RDSO furnished another report on the performance of SUDWC in March 1990 and pointed out certain defects. RDSO reiterated these deficiencies in its subsequent report of November 1990. Notwithstanding these adverse reports, the Board placed order for another 300 SUDWC in April 1991.

54. According to the Ministry of Railways, RDSO in their report of March 1990 had made the following observations regarding performance of SUDWC:

- (a) MS sheet covering referigerant pipe line should be painted to prevent corrosion;
- (b) proper clamps should be used for correct alignment;
- (c) the arrangement for securing fully on alternator shaft should be strengthened;
- (d) the positive and negative wires for operation of the clutch should be taken separately and fuse provided at the starting point; and
- (e) overhead storage tank should be provided with stoppers to prevent shifting during service.

The Ministry also stated that RDSO in their report of November 1990 had made the following observations on the performance of SUDWC:

- (a) Zero-B filter for all water coolers should be made mandatory to ensure bacteria-free drinking water;
- (b) Since the compressor is of automotive type, it is prone to theft; and
- (c) there were cases of water cooler not functioning because of dynamo belt loose/missing, compressor belt loose/missing or compressor belt disengaged.

The Ministry of Railways also informed that RDSO conducted a Techno-Economic Study of SUDWC between August 1990 and November 1990 and the report was submitted to Railway Board on 25 November 1990. According to the Ministry, the Techno-Economic report recommended that the split unit design mechanical water cooler appeared to be the only water cooler which could be improved and considered for adoption on non-airconditioned self-generating coaches.

55. In this context, the Committee's examination of the Techno-Economic report revealed that while making the aforesaid observations for considering adoption of SUDWC, RDSO had specifically mentioned that the maintainability of SUDWC under railway maintenance had to be watched for one year to ensure reliable service.

56. The Committee's scrutiny of the Techno-Economic Report has revealed that RDSO had also recommended that the work of development

of other two types of electrical water coolers then under trial should continue as most of their handicaps could be overcome with certain development work/improvements mentioned in the study report. For this purpose, RDSO had *inter alia*, recommended extended field trials of 200 Nos. of electrical water coolers with open type compressor for one year including full summer season as an alternative to mechanical type of water coolers. During evidence, the Committee enquired whether this recommendation was considered by the Railway Board. In his reply, the Chairman, Railway Board deposed:

“.. That part was considered by the Board but was not accepted.”

On being enquired about the reasons for not accepting that particular recommendation, the Chairman, Railway Board stated:

“It is not recorded anywhere...”

57. Taking note of the Audit observations that the Railway Board placed order for another 300 SUDWC in April 1991 in the face of adverse reports from RDSO, the Committee desired to know the circumstances under which the Board placed that order. In their note, the Ministry of Railway stated:

“Ministry of Railways at the highest level had decided in October 1989 that 80 important trains should be covered with water coolers on priority (about 4000 Nos.). But SUDWC being in the development stage, the procurement was restricted to about 320 Nos. only so as to watch the performance of these water coolers and take further action based on the results of the field trial. In the meantime, RDSO also carried out a Techno-Economic Study and found SUDWC to be the most economical type of water cooler.

Since the public response to fitment of these water coolers was very encouraging, the highest authority in the Ministry desired in March 1991 that before the on-set of summer, additional coaches should be provided with water coolers. The Chairman, Passenger Amenities Committee also adversely commented on the delay in procurement of water coolers. It was therefore, decided to extend the existing order of M/s. Greysam & Co. by 300 Nos.”

58. During evidence, the Committee specifically desired to know whether any specific direction was issued by the highest authority in the Ministry for procurement of the lot of 300 SUDWC. In his deposition, a representative of the Railway Board clarified:

“...Even before the Minister’s directive came for buying 300 more coolers, this aspect was under review of the full Board. In fact, the Minister’s directive came on 27.3.1991 and the full Board’s meeting was held on 13.3.1991”.

59. The Committee enquired as to why the matter for procurement of further 300 SUDWC went upto the full Board when the earlier orders for procurement of 320 SUDWC were issued without consideration by the

full Board. In his reply, the Chairman, Railway Board stated during evidence:

“The reason for this, as can be seen from the records which are now available, is that then trials were going on for three types of water coolers— two on ICF and one on split unit type. The second point is about the potability of water. Because the water tank is common, the same water tank feeds the bathroom and toilet and the same water tanks feeds the water cooler through filter. So this issue of trials going on and potability of water, was raised by the Member, Traffic separately in the same file. ....The matter went upto the then Chairman, Railway Board and he felt that the potability of water was under question. More than one trial was going on. Three were being tried. So, he thought, that it was better that the full Board should take a view. The then Chairman, Railway Board took a view that let the matter come up before the Board before any further consideration is there on the subject. Then, the full Board decided, based upon the performance till then, that 300 water coolers could be procured.”

#### **IV. Maintenance and Monitoring**

60. According to the Audit paragraph, 320 water coolers procured initially were to be fitted in eight pairs of nominated trains for proper maintenance and monitoring. However, the Railway Board increased the number of trains to 80 in March 1990. Due to this mass nomination, maintenance and monitoring could not be done effectively and monitoring was limited to 20 to 70 SUDWC out of 320 procured. Northern Railway also did not ensure issue of maintenance instructions to other Zonal Railways.

61. In their note to the Committee on this aspect, the Ministry of Railways stated that the Railway Board had decided at the highest level in October 1989 that 80 prominent trains should be fitted with water coolers. But only 320 water coolers for 8 trains were procured as SUDWC was still under development. All these coolers were fitted on trains which were based at New Delhi and their performance was properly monitored. The Ministry of Railways also stated that part of the second lot of 300 additional water coolers were fitted on Tamil Nadu and GT Express trains which were based on Southern Railway. Northern Railway was also stated to have asked Southern Railway in October 1991 to send their staff to the suppliers works for training and maintenance of water coolers. Southern Railway was also stated to have been requested to create necessary maintenance and repair facilities.

62. The information made available to the Committee by the Ministry however, revealed that RDSO reported in December 1991 that “the performance of water coolers has not been satisfactory because of the retrofitment and non-standardisation of fitment of SUDWC”.

63. Replying to a question on the installation and maintenance of SUDWC, the Chairman, Railway Board also admitted during evidence:

“.....We went into maintenance problems and could not continue with the trial. We discontinued it.”

**V. Discontinuance of the scheme for provision of water coolers**

64. The Audit paragraph brings out that the scheme which was evolved to enhance passenger amenities was abandoned five years later due to injudicious decision of the Railway Board to procure contested and defective equipment from a private firm.

65. According to the information furnished by the Ministry, the Railway Board decided to discontinue fitment of water coolers on coaches in May 1992.

66. The Committee have been informed by the Ministry that an Enquiry Committee was constituted on 6 July 1992 with the following broad terms of reference:

- (a) Design and fitment of these water coolers on coaches;
- (b) Safety and security of these water coolers and its fittings;
- (c) Reasons for not monitoring and why due attention could not be paid for repairs *i.e.*, operating reasons, staff for maintenance etc;
- (d) Reasons for various deficiencies and preventive action being taken; and
- (e) Possibility of making these operative now.

67. According to the Ministry of Railways, the meeting of this Enquiry Committee was fixed twice on 25 August, 1992 and 2 September 1992 but the same could not take place. Since the report of the Enquiry Committee was getting delayed, a Committee of Mechanical Officers was subsequently nominated which submitted its report on 20 October 1992

68. The Committee have been informed that the Enquiry Committee found the working of water coolers unsatisfactory on the following grounds:

- (a) Working out of compressor belt;
- (b) Fragile design of compressor drive and extension pulley;
- (c) Damage to cooling pipes and condensor during run on account of flying ballast and cattle run-over;
- (d) Pilferage of compressor, condensor, drier, etc.; and
- (e) Trial of water cooler is not possible when coach is stationary.

The Enquiry Committee is also stated to have made the following recommendations:

- (a) No further installation of water coolers to this design and trial be treated as closed;
- (b) Existing water coolers be removed and used for stationary purpose; and
- (c) RDSO should develop a design where all items are on board with suitable anti-pilferage device.

69. On being enquired whether the private firm was held responsible for the failure of the SUDWC units, the Ministry of Railways in their note stated that since performance of SUDWC was found generally satisfactory till early 1992 i.e., one to one and a half year after the supply, the private firm was not held responsible.

#### VI. Status of ICF experiments

70. The Committee have been informed by the Ministry of Railways that the current status of 10 water coolers fitted by ICF is not readily available. However, one water cooler from one coach allotted to Western Railway was removed within six months due to poor performance and pilferage. According to the Ministry, the development efforts were given up in March 1993 because the performance of initial lot was not satisfactory and that the scheme of had to be discontinued because no suitable design with satisfactory performance could be developed.

#### VII. Total Expenditure on the Scheme

71. According to the Ministry of Railways, the total expenditure incurred on the aborted scheme is as follows:

1. Cost of 620 Nos. SUDWC	Rs. 1,78,41,760
2. Approximate cost of 10 Nos. coolers fitted by ICF	Rs. 2,85,900 plus taxes
3. Cost of 300 Zero-B filters	Rs. 9,42,000 plus taxes
Total	<hr/> Rs. 1,90,69,660 plus taxes <hr/>

#### VIII. Conclusions and Recommendations

72. The Committee note that in pursuance of the recommendation made by the Passenger Amenities Committee in its report of 1985, the Railway Board decided in August 1987 that water coolers should be provided at least in Air Conditioned (AC) coaches of superfast trains having halts after several hours' interval. Accordingly, Railway Board asked Integral Coach Factory (ICF), Perambur on 12 August 1987 to develop a suitable system for providing water coolers in AC coaches. Subsequently, ICF turned out two AC-Two tier coaches with water coolers in June and July 1988 with the first coach having open compressor driven by DC motor and the other

having sealed compressor fitted with an inverter developed by ICF. The progress of fitment of water coolers in coaches was reviewed by the Railway Board at the highest level in August 1988 when the Research Design and Standards Organisation (RDSO) was also asked to coordinate with Production units and Zonal Railways on the issues of: (a) development of a suitable inverter; (b) development of suitable water filter; (c) resolve all outstanding technical problems; and (d) development of 3KW alternator for MG coaches. According to the information made available to the Committee, the work of fitment of water coolers in coaches was assigned top priority by the Railway Board which also set a target of March 1989 for resolving all technical problems so as to fit water coolers in all new coaches and existing rakes.

73. From the information made available to them, the Committee find that while efforts were being made by ICF and RDSO to develop and test water coolers and its components and to resolve all technical problems relating thereto, the Railway Board had separately taken up for consideration in October-November 1988 the design of a electric motor type water cooler for Broad Gauge AC-2 tier coaches which was being developed by a private firm M/s. Greysham & Company, Delhi. Since the Members — Mechanical and Electrical in the Railway Board had decided to try that type of water cooler, a written directive was issued on 4 January 1989 by the Railway Board to the General Manager of Western Railway to place a trial order on the private firm for one such water cooler and send monitoring reports within three months of the operation of the trial. Strangely enough, the Chairman, Railway Board deposed during evidence that this particular water cooler was "never tried". On the other hand, the Ministry of Railways informed the Committee that since a suitable inverter had not been developed for that type of water cooler, the same firm developed a split unit design water cooler (SUDWC) without the electric motor and again approached the Railway Board on 20 January 1989 for permission to carry out its trial on one of the coaches at Northern Railway. Incidentally, this request of the private firm was addressed to the then Member (Mechanical) in the Railway Board. The Committee are distressed to observe that instead of initiating steps to undertake a comprehensive technical examination of SUDWC and capability of the firm claiming to have successfully developed the new concept, the Member (Mechanical) in a rather unusual manner considered the proposal from the private firm and entrusted the matter to the Northern Railway authorities to pursue with the party. Astonishingly, he did not make any attempt to associate RDSO with the proposed trials of SUDWC at that stage inspite of that organisations being a specialised agency already involved in similar development efforts of Railways for fitment of water coolers in coaches. In the absence of any plausible explanation, the Committee are not convinced with the argument now advanced by the Ministry of Railways that this work was entrusted to Northern Railway with close monitoring by Railway Board only to cut



coordination delays. In the light of the facts enumerated above, the Committee are of the strong view that the then Member (Mechanical) displayed an unwarranted hurry in the matter without paying due regard to the coordinated approach expected in this case. At this stage, the Committee can only express their unhappiness over the manner in which the Member (Mechanical) proceeded with the proposal of the private firm for trial of SUDWC which was not even actually produced when the offer was made to the Railway Board.

74. The Committee note that the first service trials of SUDWC conducted on 3 May 1989 on a Northern Railway coach were unsuccessful and had to be abandoned and the Chief Mechanical Engineer of Northern Railway had opined that the arrangement did not have the potential for success. However, the subsequent field trials undertaken by Northern Railway on the same coach between 25 May and 1 June 1989 were considered successful and a decision was taken in the Railway Board to procure 60 units of SUDWC for extended trials. In the absence of any technical evaluation and appraisal of SUDWC by a specialised agency, the Committee are unable to comprehend as to how the Railway Board could consider the field trials of only one SUDWC for a week as successful enough to conclude that as many as 60 units of that water cooler could be procured in the first instance for extended field trials. Obviously, the whole matter was dealt with in a perfunctory manner in the Railway Board and it calls for a plausible explanation.

75. What has perturbed the Committee more is the manner in which the tender inquiry addressed to the private firm for procurement of 60 SUDWC was floated by the officials in the Railway Board. The Committee's examination has revealed that the approval for inviting tenders was accorded by the Advisor (Finance) on 3 July 1989 and the Executive Director (Dev.) had issued direction to junior officials on 4 July 1989 that the tender inquiry might be floated. Accordingly, a note "inviting quotations for supply of 60 numbers of water cooler indicating last date of receipt of tender by 14.30 hrs. on 6.7.1989" was submitted by two officials having their signatures affixed on 6 July 1989. Curiously enough, the date of signature of both these officials on that note was subsequently superscribed as 4 July 1989. Obviously, these two junior officials were not aware of the implication of the date when they submitted the note to the Executive Director (Dev.) who while signing that note had put the date as 4 July 1989. Considering the fact that the supply of SUDWC was to be obtained from a single source, the Committee fail to understand as to what prompted the Railway authorities to process and finalise the tender inquiry in a hurried and suspicious manner by resorting to even superscribing the dates on the note. They, accordingly, desire that this matter should be thoroughly looked into with a view to ascertaining whether any extraneous considerations guided the course of action in the instant case.

76. Another disquieting aspect observed by the Committee relates to the manner in which the reasonability of the price of SUDWC was assessed by the Railway Board. Although it is an accepted practice to obtain price break-up from the suppliers, the Railway Board did not insist on the same in this case and arrived at the reasonableness of the quoted rates of mechanical type SUDWC by comparing the same with different types of electrical water coolers procured by ICF. During the course of examination, the Ministry of Railways tried to justify the rates paid by them for SUDWC by comparing its various components vis-a-vis those used in the electric motor type coolers. In the absence of any specific details of rates of various components of SUDWC, the Committee are not inclined to accept the pleas made by the Ministry in this regard. They are of the firm view that price break-up in such cases should have been insisted upon particularly when the items were being procured for the first time with a view to protecting the interests of Government. The Committee hope that the matter would at least now be examined in depth to lay down proper guidelines for the future.

77. What has further disquieted the Committee is the manner in which the Railway Board enhanced the orders for procurement of SUDWC from 60 units to 320 units within 13 days from the date of placement of initial order. The Committee have been informed during the course of examination of the subject that the then Minister of State (Railways) in a note to Chairman, Railway Board and Member (Mechanical) had desired to know the reasons for ordering only 60 water coolers against his instructions of 400 units and ordered that the additional quantity to cover 80 prominent trains should be issued within seven days. Accordingly, the Board had increased the quantity to 320 units on the basis of specified trains operating from Delhi with the proviso that the enhanced quantity of 260 numbers would be supplied after six to eight weeks of satisfactory service experience of the first lot of 60 units of SUDWC. The Committee's scrutiny of the relevant records of the Railway Board, however, revealed that the Member (Mechanical) in his note to the Minister of State (Railways) did not bring to his notice that the particular type of water coolers had not been fully tested and that the order for even first lot of 60 units was based on inadequate trials without any technical appraisal of the equipment offered by the private firm. In view of the foregoing, the Committee are of the firm opinion that the Railway Board failed to advise the Minister of State (Railways) in the right perspective and they cannot absolve themselves of this responsibility.

78. While the tender Committee had recommended that the inspection of first lot of 60 units of SUDWC be carried out by Director General (RDSO) or his authorised representatives, the then Executive Director (Dev.) had modified the recommendation and assigned this task to Chief Mechanical Engineer of Northern Railway. Considering the fact that the tender Committee in their wisdom had specifically assigned the task of inspection of SUDWC to RDSO which is a specialised agency for standardising the specification of equipment in use in Railways, the Committee are unable to

comprehend as to what specific considerations weighed with the then Executive Director (Dev.) in modifying that recommendation of the tender Committee to entrust the task to the same authority which had also been assigned the task of subsequently judging the performance of the equipment under development.

79. The Committee note that the Ministry of Railways had forwarded a proposal to RDSO in August 1989 to study SUDWC and evaluate its performance. The Audit paragraph however, brings out that while RDSO had made available their findings in September 1989 to Northern Railway and the Railway Board pointing out certain design and operational problems in SUDWC and advised discontinuance of further procurements till these problems were satisfactorily resolved, the Railway Board went ahead with procurement of additional 260 units in November 1989. During his deposition before the Committee, the Chairman, Railway Board initially maintained that "the RDSO had at no point of time told the Railway Board that the trials should be discontinued". He also placed before the Committee a copy of the letter of RDSO dated 14-15 September 1989 according to which RDSO had advised that "the provision of the mechanical water cooler should be watched and feedback sent to RDSO so that a satisfactory solution is found to the problems.....". Amazingly, the Committee's further scrutiny during the course of oral examination of the subject revealed that the very same copy of this letter available in the files of Northern Railway Headquarters contained a contradictory version whereby the RDSO had advised that "the provision of the mechanical water cooler should be discontinued till a satisfactory solution is found to the problems.....". During evidence, the Chairman, Railway Board subsequently admitted that it was a very serious matter and that the Railways were ordering an inquiry into the same. Yet the fact remains that the advice of RDSO as contained in the copy of the relevant letter available in the files of RDSO and the Railway Board is at variance with that available in the files of Northern Railway Headquarters. Undoubtedly, unscrupulous elements had forged the contents of the RDSO letter with ulterior motives. In the opinion of the Committee, this fraud could be perpetrated only with the active collusion of Railway authorities. What is still more distressing is the fact that this gross irregularity had either remained undetected in the Railway Board or the Railway authorities deliberately chose to keep the Committee in the dark about this fraudulent action till the Committee themselves pointed out the same during the course of oral evidence on the subject. While deprecating this outrageous conduct by the Ministry of Railways, the Committee strongly recommend that an inquiry into the whole episode relating to forged documents may be conducted expeditiously by an independent investigative agency with a view to identifying the persons responsible for this criminal act and initiating appropriate legal action against them. The

Committee would like to be apprised of the findings of such inquiry and action taken thereon within a period of three months.

80. Yet another disquieting aspect observed by the Committee relates to the manner in which the Railway Board dealt with their own contractual stipulation according to which Railways were to procure additional 260 units of SUDWC from the private firm only after the successful trial of initial lot of 60 units for a period of six to eight weeks. The Committee's examination, however, revealed that while a number of water coolers continued to be installed till the end of October 1989, the then Executive Director (Dev.) in a rather inexplicable manner considered the two performance reports for the period ending 31 October and 1 to 10 November 1989 furnished by the Northern Railway to imply that the water coolers had been "in service for an average cycle of about 7 weeks" which was patently incorrect and recommended that the firm be permitted to supply additional 260 units. Undoubtedly, the trials of the initial lot of 60 water coolers had not taken place for the stipulated period. In the opinion of the Committee, this fact amply proves that the Railway Administration had a soft corner for this particular firm and the authorities were in undue haste to place orders for the additional quantity of 260 water coolers. The Committee consider it unfortunate that such a grave irregularity in enforcing contractual obligation went unnoticed at different levels in the Railway Board. What is still more surprising is that the Railway Administration preferred to rely on the performance report relating to the month of November which by no stretch of imagination can be called an appropriate period in the northern part of the country for judging the performance of water coolers which were still in a developmental stage.

81. What is still more disturbing is the fact that while the Chief Electrical Services Engineer in the Northern Railway had endorsed the view point expressed by RDSO on the adverse impact on the train lighting system due to provision of mechanical water cooler in coaches and apprised the Secretary (Elec.) in the Railway Board of the same on 4 October 1989, the Railway Board did not appear to have taken cognisance of these findings before placing order for additional 260 units of SUDWC. On the other hand, the then Executive Director (Dev.) in a rather unusual manner took into account only the two performance reports furnished by the Chief Rolling Stock Engineer in Northern Railway and concluded in his note recorded on 17 November 1989 that the results of the detailed analysis of the performance reports prepared by the Northern Railway did not predict any nature of defects as projected by RDSO. Evidently, there was complete and deliberate lack of co-ordinated approach in the Railway Board which failed to give credence to the defects in mechanical water coolers as pointed out by RDSO and the Electrical wing of the Northern Railway. The Committee express their unhappiness over this state of affairs and they desire Railway Board to deal with such matters in a rational manner in future.

82. The Committee note that the Railway Board placed another order for 300 SUDWC in April 1991 despite the RDSO pointing out certain defects in the performance of SUDWC in their reports of March and November 1990. According to the Ministry of Railways, it was decided to extend the order of the private firm by 300 numbers because the public response to fitment of those water coolers was very encouraging. The Committee find it difficult to accept this plea of the Ministry in the absence of any justifiable evidence.

83. What has further perturbed the Committee is the fact that the Railway Board did not also pursue RDSO's another recommendation contained in its Techno-economic Report of November 1990 to conduct extended field trials of 200 numbers of electrical water coolers with open type compressor as an alternative to mechanical type of water coolers. Although this matter was stated to have been considered by the Railway Board and not accepted by them, the Committee were informed during evidence that no record on this aspect was available anywhere in the Board. The only conclusion that can be drawn from this fact is that the findings and the technical opinions expressed by RDSO from time to time were not given any consideration by the concerned wing of the Railway Board nor any efforts made to promote development of other types of water coolers under experiment with ICF.

84. During the course of examination, the Committee have been informed that the Railway Board decided to discontinue fitment of water coolers on coaches in May 1992 because Railways went into maintenance problems and could not continue with the trials. An inquiry committee was also constituted on 6 July 1992 to *inter alia* ascertain "the reasons for not monitoring and why due attention could not be paid for repairs." According to the information made available to the Committee, the inquiry committee submitted its report on 20 October 1992 and found the working of water coolers unsatisfactory on several counts and recommended that no water coolers of this design be further installed. The Committee hold the Railway Board themselves responsible for this fiasco resulting not only in the abrupt abandonment of the passenger amenity but also rendering the entire expenditure of over Rs. 1.90 crores infructuous.

85. To sum up, the Committee's examination of the scheme evolved by the Ministry of Railways to provide water coolers in coaches and its eventual abandonment has revealed serious shortcomings/irregularities. There were clear instances where Railway Board not only displayed lack of coordination and concerted approach but also functioned in an unbridled manner ignoring the findings of their own agencies on the deficiencies in the design and operation of SUDWC. There were also occasions when indulgence was shown to the private firm at various stages. Above all, the Railways had miserably failed to detect the criminal act whereby the contents of a specific letter were forged to change the course of action for procurement of a particular design of water cooler. The Committee deplore

**this unsatisfactory conduct and desire that the facts brought out in this Report should be thoroughly looked into by the Ministry of Railways with a view to streamlining their systems and procedures as well as taking adequate action against persons found responsible for the glaring acts of omissions and commissions. The Committee would like to be apprised of the precise action taken in the matter.**

NEW DELHI;  
18 November, 1997  

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27 Kartika, 1919 (*Saka*)

DR. MURLI MANOHAR JOSHI  
*Chairman,*  
*Public Accounts Committee.*

## APPENDIX I

### PARAGRAPH 4.3.1 OF REPORT OF THE C&AG OF INDIA FOR THE YEAR ENDED 31 MARCH 1995 (NO. 10 OF 1996) UNION GOVERNMENT (RAILWAYS) RELATING TO INFRACTUOUS EXPENDITURE ON PURCHASE OF WATER COOLERS AND FILTERS

#### 4.3.1 Northern Railways: Infructuous expenditure on purchase of water coolers and filters

The Railway Board decided in August 1987 to provide water coolers in coaches with a view to supply cool drinking water to the travelling public and directed the Research Design and Standards Organisation (RDSO) to co-ordinate with the Production Units and the Zonal Railways to develop (i) appropriate inverter to convert the Direct Current (DC) into Alternate Current (AC) for use by the water cooler, (ii) suitable water filter, and (iii) suitable alternator for MG coaches.

While efforts were made by the Integral Coach Factory (ICF), Perambur to develop and test suitable water cooler and inverter, a private firm of New Delhi informed the Board in January, 1989 that it had developed a successful "Split Unit Design Water Cooler" (SUDWC) suitable even for second class coaches and requested for trials on one Northern Railway (NR) coach. The proposal was sent to RDSO in February 1989 for their examination. However, even before receipt of the report of the RDSO, the Board decided in June 1989 to provide 60 SUDWC in two trains namely Shane-E-Punjab and Malwa Express and placed a developmental order on 13 July 1989 for the supply, installation and commissioning of 60 SUDWC on nominated coaches at a cost of Rs. 17.1 lakhs. After 13 days, the quantity was increased by 260 SUDWC on 26 July 1989 at a cost of Rs. 90.94 lakhs. Despite known and proven malfunctioning and maintenance problems, the Board procured additional quantity of 300 SUDWC in April 1991 at a further cost of Rs. 85.20 lakhs. In addition, in June 1991 the Board ordered 300 Zero-B filters with cartridges and spares on another firm at a cost of Rs. 9.42 lakhs for fitment in these water coolers.

However, due to drawbacks in design, installation and maintenance, the Board decided in January 1993 that there was no need for provision of water coolers in future.

Audit examination of the relevant records showed as under:

When the private firm approached the Board in January 1989 seeking permission to test their SUDWC on the trains, ICF was conducting trials on three other types of coolers of which one was found to give satisfactory performance and the passengers' reaction was favourable.

However, the Board ignored these trial experiments and took a unilateral decision to procure SUDWC without undertaking a comparative study of the performance of SUDWC and ICF developed prototypes.

Eventhough the Board forwarded the proposals for SUDWC to RDSO in February 1989 for study, it did not wait for the feedback from RDSO on the suitability of SUDWC *vis-a-vis* other water coolers under trial by ICF.

While the trials of specially developed water coolers were undertaken by ICF in line with the original proposal of the scheme, the experiment on SUDWC was separately entrusted to the Northern Railway without coordination with RDSO and ICF. Since the equipment failed in the very first service trial conducted in May 1989, the Railway Administration stipulated further extended trials for 3 months from 1 July 1989. Before any concrete conclusion was drawn from these trial runs, the Board took a decision to procure 60 SUDWC on 23 June 1989 and placed orders on 13 July 1989 enhanced the quantity to 320 on 26 July 1989.

The Board assigned the inspection of equipment to Northern Railway and did not associate either RDSO or ICF. The inspection was assigned to the authorities of the Mechanical Department and the Electrical Department was not associated.

In September 1989 RDSO pointed out to Northern Railway, with copy to the Board, certain design and operational problems in SUDWC and advised discontinuance of further procurement till these were satisfactorily resolved. Northern Railway agreed with the design and operational problems reported by RDSO but apprised the Board in November 1989 the results of 10 days performance from 1 to 10 November 1989 in respect of all 60 water coolers and claimed 95 per cent success rate which was also accepted by the Board.

The Board overruled the advice of RDSO in September 1989 to discontinue provision of mechanical water cooler in the trains till satisfactory solutions were found to the design and operational problems and went ahead with procurement of additional 260 units, although the Board was aware of the defects in design and installation and the equipment had not been in service long enough for a definite opinion about its reliability and efficiency RDSO furnished another report on the performance of SUDWC in March 1990 and pointed out that the compressor used in the equipment was theft prone, besides other defecis, RDSO reiterated these deficiencies in its subsequent report of November 1990. Notwithstanding these adverse reports, the Board placed order for another 30 SUDWC in April 1991. between August and November 1991, 75 cases of thefts were reported to Railway Protection Force for investigation. In March 1993, on the Southern Railway and South Central Railway, 86 compressors were found missing. Losses on account of thefts of various items of SUDWC amounted to more than Rs. 21 lakhs.



Although the 320 water coolers procured initially were to be fitted in 8 pairs of nominated trains for proper maintenance and monitoring, the Board increased the number of trains to 80 in March 1990. Due to the mass nomination, maintenance and monitoring could not be done effectively and monitoring was limited only to 20 to 70 SUDWC out of 320 procured. Northern Railway also did not ensure issue of maintenance instructions to other Railways.

The price of Rs. 25,000 per unit demanded by the firm was accepted with only marginal reductions without insisting upon break-up for analysis and reasonableness on the plea that it was a new equipment and not comparable with those on trial by ICF which cost between Rs. 25,000 and 30,000. Unlike ICF developed prototypes, SUDWC did not have motors and therefore the price of Rs. 25,000 per unit was prima facie excessive.

There was no regular assessment of performance of the water filters. Only in August, 1992, the Southern Railway Administration intimated that the filters got choked preventing free flow of water.

The scheme which was evolved to enhance passenger amenities was abandoned five years later due to injudicious decision of the Board to procure contested and defective equipment from a private firm at a higher cost. Consequently the expenditure on 620 SUDWC and 300 Zero-B filter amounting to Rs. 1.84 crores proved infructuous. The losses on account of thefts as ascertained during test checks amounted to Rs. 21.43 lakhs.

The matter was referred to the Railway Administration in June 1995; reply has not been received (December 1995).

## APPENDIX II

### GOVERNMENT OF INDIA—MINISTRY OF RAILWAYS RESEARCH DESIGNS & STANDARDS ORGANISATION

No.EL/7.1.6./J7.

LUCKNOW-226011 Date 14.9.1989.

The General Manager (Elect.),  
Northern Railway, Baroda House,  
NEW DELHI-110001.

SUB: *Mechanical water cooler.*

It is understood that Northern Railway is providing mechanical water coolers in the coaches of Shane Avadh Exp. Train. Northern Railway's coaches No. NR 12506 was inspected by the undersigned on 22.8.89, which is having this type of water cooler. The compressor of the water cooler has been provided the drive by two numbers of V-belts which are driven from the pulley of the train lighting alternator. A 2 groove V-belt pulley has been fixed on the train lighting alternator shaft which drives the V-groove pulley of the compressor in conjunction with an electrical clutch arrangement. A sketch of the arrangement provided is enclosed herewith.

2. The above arrangement of taking the drive for compressor from T.L. alternator shaft has introduced following draw backs on the train lighting system:

(a) The design of the flat belt or V-belts of the train lighting alternator has been made for a specified load. Since the load of the compressor of water cooler is taken from the alternator shaft, this overloads the belts of the T.L. alternator. Therefore, this arrangement shall result into slipping of the belts loading to under-generation. The life of the belts also shall be adversely effected.

(b) The boaring of the alternator is also getting mechanically overloaded, which will be reflected into lossier life of the same.

(c) Since the tension of the train lighting belt and compressor belts are in different directions, viz—alignment of the alternator pulley with respect to axle pulley shall take place, which is an unacceptable situation.

(d) The supply of the electrical clutch arrangement has been given at 12 volts by taking the connection from junction box through a resistor. The design of the resistor and its location should be sent to this office for examining any possibilities of fire hazards.

The power required for operation of the clutch shall also have to be considered for designing the capacity of the battery, which has not been done while introducing the above system.

3. The above arrangement also suffers from the draw back that the water cooler will not function if flat belt of the train lighting alternator is stolen.

4. In view of the above, it is advised that the provision of the mechanical water cooler should be discontinued till a satisfactory solution is found to the problems mentioned above.

Sd/-  
(A.K. Rawal)

for Director General/Elect.

Copy by to Secretary (Elect), Railway Board, Rail Bhavan,  
New Delhi—110001 for information please.

(A.K. Rawal)  
for Director General/Elect.

### APPENDIX III

No.EL/7.1.6./J7.

The General Manager (Elect.),  
Northern Railway, Baroda House.  
New Delhi-110001.

SUB: *Mechanical Water Cooler.*

It is understood that Northern Railway is providing mechanical water coolers in the coaches of Shane Avadh Exp. Train. Northern Railway's coaches No. NR 12506 was inspected by the undersigned on 22.8.89, which is having this type of water cooler. The compressor of the water cooler has been provided the drive by two numbers of V-belts which are driven from the pulley of the train lighting alternator. A 2 groove V-belt pulley has been fixed on the train lighting alternator shaft which drives the V-groove pulley of the compressor in conjunction with an electrical clutch arrangement. A sketch of the arrangement provided is enclosed herewith.

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- (b) The boaring of the alternator is also getting mechanically overloaded, which will be reflected into lesser life of the same.
- (c) Since the tension of the train lighting belt and compressor belts are in different directions, viz—alignment of the alternator pulley with respect to axle pulley shall take place, which is an unacceptable situation.
- (d) The supply of the electrical clutch arrangement has been given at 12 volts by taking the connection from junction box through a resistor. The design of the resistor and its location should be sent to this office for examining any possibilities of fire hazards. The power required for operation of the clutch shall also have to be considered for designing the capacity of the battery, which has not been done while introducing the above system.

3. The above arrangement also suffers from the draw back that the water cooler will not function if flat belt of the train lighting alternator is stolen.

4. In view of the above, it is advised that the provision of the mechanical water cooler should be watched and feed-back sent to RDSO so that a satisfactory solution is found to the problems mentioned above.

(A.K. Rawal)

DA: one.

for Director General/Elect.

Copy by to Secretary (Elect), Railway Board, Rail Bhavan, New Delhi—110001 for information please.

(A.K. Rawal)

for Director General/Elect.

## APPENDIX IV

### GOVERNMENT OF INDIA MINISTRY OF RAILWAYS (RAILWAY BOARD)

No. 89/Elec.(G)/165/2

New Delhi, Dated: 12.10.1989.

General Manager (Elec.),  
Northern Railway,  
New Delhi.

SUB: *Mechanical Water Cooler.*

Ref : DG(Elec.)/RDSO's letter No. EL/7.1.6/J7  
dated 14/15.9.1989 addressed to you, copy  
endorsed to Secy. (Elec.), Rly., Board.

The report regarding adverse performance of electrical system due to fitment of compressors of water coolers directly mounted on alternator shaft should be sent to RDSO and Board as well.

Sd/-  
(D.D. Pahuja)  
Jt. Director, Elec. Engg:(G),  
Railway Board.

Copy to :

Director General (Elec.), RDSO, Lucknow. The views of Carriage Dept. of RDSO also should be obtained in the matter and a consolidated reply of RDSO on adverse effects of this arrangement on electrical system should be advised to Development & Mechanical Directorates as well in future.

Sd/-  
(D.D. Pahuja)  
Jt. Director, Elec. Engg:(G),  
Railway Board.

**NORTHERN RAILWAY  
HEADQUARTERS OFFICE:  
BARODA HOUSE:  
NEW DELHI.**

No. 62-Elect/1/TL, BG IV

Dated: 4-10-89

The Director General/Electrical,  
R.D.S.O., Lucknow.

SUB:—*Mechanical Water Cooler.*

Ref:—Your letter No. EL/7.1.6/J7 dated 14/15.9.1989.

These water coolers have been provided by Mechanical department of Northern Railway without any consultation with Electrical department. It is further understood that this system of water cooler is being provided by Mechanical department in coaches of Malwa Express in accordance with the design as indicated in the sketch enclosed with your letter.

I agree with the various points raised by you in para 2 of your letter, namely, a,b and c. The existing alternator drive does not take into account this additional load and therefore in coaches where these water coolers are provided, frequent loss of belts and mis-alignment of the alternator is expected.

Further the two Nos. V-belts provided to drive compressor of the water cooler will make swinging of the alternator very difficult while fitting a new belt as this V-belt will exercise a pull in the direction away from the axls pulley and therefore this arrangement of taking drive of compressor from the alternator pulley is not satisfactory, and will lead to excessive consumption of flat belt and premature failure of alternator bearings.(\*)

In para 2(d) of your letter, you have discussed the arrangement of supplying 12 volts d.c. to the clutch of the water cooler compressor. As the coaches are working on train lighting system which is 24 volts d.c., it is desirable that the clutches should be re-designed to work at this voltage and use of 12 volt, should be avoided. The arrangement of obtaining the power supply for clutch should therefore incorporate all safety precautions are required by R.D.S.O.

It is noted that the water cooler will function only when the coach is running. This is not likely to be any serious handicapped particularly on fast Mail and Express trains with limited stops. It is however

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(\* ) The Water Cooler compressor is so located that it will make removal of the alternators suspension pin very difficult in case alternator requires replacement.

felt that the drive for, the water cooler compressor should be taken independent of the alternator by providing another axle pulley so as not to interfere with the train lighting system and avoid any train lighting failure on this account.

Sd/-

(P.K. KHULLER)

Chief Electrical Services Engineer.

Copy to:—

1. Secretary/Electrical, Rly. Board for kind information in reference to RDSO's letter under reference.

2. C.R.S.E., N.Rly. Boarda House, New Delhi for kind information along with copy of the RDSO's letter. He is requested to obtain necessary guidance from the Electrical and Carriage Directorate of RDSO concerning provision of water coolers and only follow Standard design evolved by RDSO.

Encl: as above.

3. D.R.M./N. Rly. DRM's Office, New Delhi along with a copy of RDSO's letter.

Encl: as above.



**APPENDIX V**  
**CONCLUSIONS AND RECOMMENDATIONS**

Sl. No.	Para No.	Ministry/ Deptt. Concerned	Conclusion/Recommendation
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1.	72	Ministry of Railways (Railway Board)	<p>The Committee note that in pursuance of the recommendation made by the Passenger Amenities Committee in its report of 1985, the Railway Board decided in August 1987 that water coolers should be provided at least in Air Conditioned (AC) coaches of superfast trains having halts after several hours' interval. Accordingly, Railway Board asked Integral Coach Factory (ICF), Perambur on 12 August 1987 to develop a suitable system for providing water coolers in AC coaches. Subsequently, ICF turned out two AC-two tier coaches with water coolers in June and July 1988 with the first coach having open compressor driven by DC motor and the other having sealed compressor fitted with an inverter developed by ICF. The progress of fitment of water coolers in coaches was reviewed by the Railway Board at the highest level in August 1988 when the Research Design and Standards Organisation (RDSO) was also asked to coordinate with Production units and Zonal Railways on the issues of (a) development of a suitable inverter; (b) development of suitable water filter; (c) resolve all outstanding technical problems; and (d) development of 3KW alternator for MG coaches. According to the information made available to the Committee, the work of fitment of water coolers in coaches was assigned top priority by the Railway Board which also set a target of March 1989 for resolving all technical problems so as to fit water coolers in all new coaches and existing rakes.</p>

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2	73 Ministry of Railways (Railway Board)	<p>From the information made available to them, the Committee find that while efforts were being made by ICF and RDSO to develop and test water coolers and its components and to resolve all technical problems relating thereto, the Railway Board had separately taken up for consideration in October-November 1988 the design of a electric motor type water cooler for Broad Gauge AC-2 tier coaches which was being developed by a private firm M/s. Greysham &amp; Company, Delhi. Since the members-Mechanical and Electrical in the Railway Board had decided to try that type of water cooler, a written directive was issued on 4 January 1989 by the Railway Board to the General Manager of Western Railway to place a trial order on the private firm for one such water cooler and send monitoring reports within three months of the operation of the trial. Strangely enough, the Chairman, Railway Board deposed during evidence that this particular water cooler was "never tried". On the other hand, the Ministry of Railways informed the Committee that since a suitable inverter had not been developed for that type of water cooler, the same firm developed a split unit design water cooler (SUDWC) without the electric motor and again approached the Railway Board on 20 January 1989 for permission to carry out it's trial on one of the coaches at Northern Railway. Incidentally, this request of the private firm was addressed to the then Member (Mechanical) in the Railway Board. The Committee are distressed to observe that instead of initiating steps to undertake a comprehensive technical examination of SUDWC and capability of the firm claiming to have successfully developed the new concept, the Member (Mechanical) in a rather unusual manner considered the proposal from the private firm and entrusted the matter to the Northern Railway authorities to pursue with the party.</p>	

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			<p>Astonishingly, he did not make any attempt to associate RDSO with the proposed trials of SUDWC at that stage inspite of that organisation being a specialised agency already involved in similar development efforts of Railways for fitment of water coolers in coaches. In the absence of any plausible explanation, the Committee are not convinced with the argument now advanced by the Ministry of Railways that this work was entrusted to Northern Railway with close monitoring by Railway Board only to cut coordination delays. In the light of the facts enumerated above, the Committee are of the strong view that the then Member (Mechanical) displayed an unwarranted hurry in the matter without paying due regard to the coordinated approach expected in this case. At this stage, the Committee can only express their unhappiness over the manner in which the Member (Mechanical) proceeded with the proposal of the private firm for trial of SUDWC which was not even actually produced when the offer was made to the Railway Board.</p>
3	74	<p>Ministry of Railways (Railway Board)</p>	<p>The Committee note that the first service trials of SUDWC conducted on 3 May 1989 on a Northern Railway coach were unsuccessful and had to be abandoned and the Chief Mechanical Engineer of Northern Railway had opined that the arrangement did not have the potential for success. However, the subsequent field trials undertaken by Northern Railway on the same coach between 25 May and 1 June 1989 were considered successful and a decision was taken in the Railway Board to procure 60 units of SUDWC for extended trials. In the absence of any technical evaluation and appraisal of SUDWC by a specialised agency, the Committee are unable to comprehend as to how the Railway Board could consider the field trials of only one SUDWC for a week as successful enough to conclude that as many as 60 units of that water cooler could be procured in the first</p>

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instance for extended field trials. Obviously, the whole matter was dealt with in a perfunctory manner in the Railway Board and it calls for a plausible explanation.

4. 75 Ministry of Railways (Railway Board) What has perturbed the Committee more is the manner in which the tender inquiry addressed to the private firm for procurement of 60 SUDWC was floated by the officials in the Railway Board. The Committee's examination has revealed that the approval for inviting tenders was accorded by the Advisor (Finance) on 3 July 1989 and the Executive Director (Dev.) had issued direction to junior officials on 4 July 1989 that the tender inquiry might be floated. Accordingly, a note "inviting quotations for supply of 60 numbers of water cooler indicating last date of receipt of tender by 1430 hrs. on 6.7.1989" was submitted by two officials having their signatures affixed on 6 July 1989. Curiously enough, the date of signature of both these officials on that note was subsequently superscribed as 4 July 1989. Obviously, these two junior officials were not aware of the implication of the date when they submitted the note to the Executive Director (Dev.) who while signing that note had put the date 4 July 1989. Considering the fact that the supply of SUDWC was to be obtained from a single source, the Committee fail to understand as to what prompted the Railway authorities to process and finalise the tender inquiry in a hurried and suspicious manner by resorting to even superscribing the dates on the note. They, accordingly, desire that this matter should be thoroughly looked into with a view to ascertaining whether any extraneous considerations guided the course of action in the instant case.
5. 76 -do- Another disquieting aspect observed by the Committee relates to the manner in which the reasonability of the price of SUDWC was assessed by the Railway Board. Although it is an accepted practice to obtain price break-up
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from the suppliers, the Railway Board did not insist on the same in this case and arrived at the reasonableness of the quoted rates of mechanical type SUDWC by comparing the same with different types of electrical water coolers procured by ICF. During the course of examination, the Ministry of Railways tried to justify the rates paid by them for SUDWC by comparing its various components *vis-a-vis* those used in the electric motor type coolers. In the absence of any specific details of rates of various components of SUDWC, the Committee are not inclined to accept the plea made by the Ministry in this regard. They are of the firm view that price break-up in such cases should have been insisted upon particularly when the items were being procured for the first time with a view to protecting the interests of Government. The Committee hope that the matter would at least now be examined in depth to lay down proper guidelines for the future.

6. 77

Ministry of  
Railways  
(Railway  
Board)

What has further disquieted the Committee is the manner in which the Railway Board enhanced the orders for procurement of SUDWC from 60 units to 320 units within 13 days from the date of placement of initial order. The Committee have been informed during the course of examination of the subject that the then Minister of State (Railways) in a note to Chairman, Railway Board and Member (Mechanical) had desired to know the reasons for ordering only 60 water coolers against his instructions of 400 units and ordered that the additional quantity to cover 80 prominent trains should be issued within seven days. Accordingly, the Board had increased the quantity to 320 units on the basis of specified trains operating from Delhi with the proviso that the enhanced quantity of 260 numbers would be supplied after six to eight weeks of satisfactory service experience of the first lot of 60 units of SUDWC. The Committee's scrutiny of the relevant records of

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			<p>the Railway Board, however, revealed that the Member (Mechanical) in his note to the Minister of State (Railways) did not bring to his notice that the particular type of water coolers had not been fully tested and that the order for even first lot of 60 units was based on inadequate trials without any technical appraisal of the equipment offered by the private firm. In view of the foregoing, the Committee are of the firm opinion that the Railway Board failed to advise the Minister of State (Railways) in the right perspective and they cannot absolve themselves of this responsibility.</p>
7.	78	Ministry of Railways (Railway Board)	<p>While the tender Committee had recommended that the inspection of first lot of 60 units of SUDWC be carried out by Director General (RDSO) or his authorised representatives, the then Executive Director (Dev.) had modified the recommendation and assigned this task to Chief Mechanical Engineer of Northern Railway. Considering the fact that the tender Committee in their wisdom had specifically assigned the task of inspection of SUDWC to RDSO which is a specialised agency for standardising the specification of equipment in use in Railways, the Committee are unable to comprehend as to what specific considerations weighed with the then Executive Director (Dev.) in modifying that recommendation of the tender Committee to entrust the task to the same authority which had also been assigned the task of subsequently judging the performance of the equipment under development.</p>
8.	79	-do-	<p>The Committee note that the Ministry of Railways had forwarded a proposal to RDSO in August 1989 to study SUDWC and evaluate its performance. The Audit paragraph however, brings out that while RDSO had made available their findings in September 1989 to Northern Railway and the Railway Board pointing out certain design and operational problems in SUDWC and advised discontinuance of further</p>

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procurements till these problems were satisfactorily resolved, the Railway Board went ahead with procurement of additional 260 units in November 1989. During his deposition before the Committee, the Chairman, Railway Board initially maintained that "the RDSO had at no point of time told the Railway Board that the trials should be discontinued". He also placed before the Committee a copy of the letter of RDSO dated 14-15 September, 1989 according to which RDSO had advised that "the provision of the mechanical water cooler should be watched and feedback sent to RDSO so that a satisfactory solution is found to the problems.....". Amazingly, the Committee's further scrutiny during the course of oral examination of the subject revealed that the very same copy of this letter available in the files of Northern Railway Headquarters contained a contradictory version whereby the RDSO had advised that "the provision of the mechanical water cooler should be discontinued till a satisfactory solution is found to the problems.....". During evidence, the Chairman, Railway Board subsequently admitted that it was a very serious matter and that the Railways were ordering an inquiry into the same. Yet the fact remains that the advice of RDSO as contained in the copy of the relevant letter available in the files of RDSO and the Railway Board is at variance with that available in the files of Northern Railway Headquarters. Undoubtedly, unscrupulous elements had forged the contents of the RDSO letter with ulterior motives. In the opinion of the Committee, this fraud could be perpetrated only with the active collusion of Railway authorities. What is still more distressing is the fact that this gross irregularity had either remained undetected in the Railway Board or the Railway authorities deliberately chose to keep the Committee in the dark about this fraudulent action till the Committee themselves pointed out the same during the course of

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oral evidence on the subject. While deprecating this outrageous conduct by the Ministry of Railways, the Committee strongly recommend that an inquiry into the whole episode relating to forged documents may be conducted expeditiously by an independent investigative agency with a view to identifying the persons responsible for this criminal act and initiating appropriate legal action against them. The Committee would like to be apprised of the findings of such inquiry and action taken thereon within a period of three months.

9. 80 Ministry of Railways (Railway Board)
- Yet another disquieting aspect observed by the Committee relates to the manner in which the Railway Board dealt with their own contractual stipulation according to which Railways were to procure additional 260 units of SUDWC from private firm only after the successful trial of initial lot of 60 units for a period of six to eight weeks. The Committee's examination, however, revealed that while a number of water coolers continued to be installed till the end of October 1989, the then Executive Director (Dev.) in a rather inexplicable manner considered the two performance reports for the period ending 31 October and 1 to 10 November 1989 furnished by the Northern Railway to imply that the water coolers had been "in service for an average cycle of about 7 weeks" which was patently incorrect and recommended that the firm be permitted to supply additional 260 units. Undoubtedly, the trials of the initial lot of 60 water coolers had not taken place for the stipulated period. In the opinion of the Committee, this fact amply proves that the Railway Administration had a soft corner for this particular firm and the authorities were in undue haste to place orders for the additional quantity of 260 water coolers. The Committee consider it unfortunate that such a grave irregularity in enforcing contractual obligation went unnoticed at different levels in the Railway
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			<p>Board. What is still more surprising is that the Railway Administration preferred to rely on the performance report relating to the month of November which by no stretch of imagination can be called an appropriate period in the northern part of the country for judging the performance of water coolers which were still in a developmental stage.</p>
10.	81	<p>Ministry of Railways (Railway Board)</p>	<p>What is still more disturbing is the fact that while the Chief Electrical Services Engineer in the Northern Railway had endorsed the view point expressed by RDSO on the adverse impact on the train lighting system due to provision of mechanical water cooler in coaches and apprised the Secretary (Elec.) in the Railway Board of the same on 4 October, 1989, the Railway Board did not appear to have taken cognisance of these findings before placing order for additional 260 units of SUDWC. On the other hand, the then Executive Director (Dev.) in a rather unusual manner took into account only the two performance reports furnished by the Chief Rolling Stock Engineer in Northern Railway and concluded in his note recorded on 17 November, 1989 that the results of the detailed analysis of the performance reports prepared by the Northern Railway did not predict any nature of defects as projected by RDSO. Evidently, there was complete and deliberate lack of co-ordinated approach in the Railway Board which failed to give credence to the defects in mechanical water coolers as pointed out by RDSO and the Electrical wing of the Northern Railway. The Committee express their unhappiness over this state of affairs and they desire Railway Board to deal with such matters in a rational manner in future.</p>
11.	82	-do-	<p>The Committee note that the Railway Board placed another order for 300 SUDWC in April 1991 despite the RDSO pointing out certain defects in the performance of SUDWC in their reports of March and November 1990. Accord</p>

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ing to the Ministry of Railways, it was decided to extend the order of the private firm by 300 numbers because the public response to fitment of those water collers was very encouraging. The Committee find it difficult to accept this plea of the Ministry in the absence of any justifiable evidence.

12. 83      Ministry of Railways (Railway Board)      What has further perturbed the Committee is the fact that the Railway Board did not also pursue RDSO's another recommendation contained in its Techno-economic Report of November 1990 to conduct extended field trials of 200 numbers of electrical water coolers with open type compressor as an alternative to mechanical type of water coolers. Although this matter was stated to have been considered by the Railway Board and not accepted by them, the Committee were informed during evidence that no record on this aspect was available anywhere in the Board. The only conclusion that can be drawn from this fact is that the findings and the technical opinions expressed by RDSO from time to time were not given any consideration by the concerned wing of the Railway Board nor any efforts made to promote development of other types of water coolers under experiment with ICF.
13. 84      -do-      During the course of examination, the Committee have been informed that the Railway Board decided to discontinue fitment of water coolers on coaches in May 1992 because Railways went into maintenance problems and could not continue with the trials. An inquiry committee was also constituted on 6 July, 1992 to *inter alia* ascertain "the reasons for not monitoring and why due attention could not be paid for repairs." According to the information made available to the Committee, the inquiry Committee submitted its report on 20 October, 1992 and found the working of water coolers unsatisfactory on several counts and recommended that no water coolers of this

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14.	85	Ministry of Railways (Railway Board)	<p>design be further installed. The Committee hold the Railway Board themselves responsible for this fiasco resulting not only in the abrupt abandonment of the passenger amenity but also rendering the entire expenditure of over Rs. 1.90 crores infructuous.</p> <p>To sum up, the Committee's examination of the scheme evolved by the Ministry of Railways to provide water coolers in coaches and its eventual abandonment has revealed serious shortcomings/irregularities. There were clear instances where Railway Board not only displayed lack of coordination and concerned approach but also functioned in an unbridled manner ignoring the findings of their own agencies on the deficiencies in the design and operation of SUDWC. There were also occasions when indulgence was shown to the private firm at various stages. Above all, the Railways had miserably failed to detect the criminal act whereby the contents of a specific letter were forged to change the course of action for procurement of a particular design of water cooler. The Committee deplore this unsatisfactory conduct and desire that the facts brought out in this Report should be thoroughly looked into by the Ministry of Railways with a view to streamlining their systems and procedures as well as taking adequate action against persons found responsible for the glaring acts of omissions and commissions. The Committee would like to be apprised of the precise action taken in the matter.</p>

## PART II

### MINUTES OF THE FIFTH SITTING OF THE PUBLIC ACCOUNTS COMMITTEE HELD ON 6 JUNE 1997

The Committee sat from 1500 hrs. to 1830 hrs. on 6 June, 1997 in Committee Room "B", Parliament House Annexe.

#### PRESENT

Dr. Murli Manohar Joshi — *Chairman*

#### MEMBERS

##### *Lok Sabha*

2. Shri Anandrao Vithoba Adsul
3. Shir Nirmal Kanti Chatterjee
4. Shri Ramesh Chennithala
5. Shri Prithviraj D. Chavan
6. Prof. Ajit Kumar Mehta
7. Shri V.V. Raghavan
8. Shri Ishwar Dayal Swami

##### *Rajya Sabha*

9. Shri Surinder Kumar Singla
10. Shri Vayalar Ravi

#### SECRETARIAT

1. Shri J.P. Ratnesh — *Joint Secretary*
2. Shri P. Sreedharan — *Deputy Secretary*
3. Shri Rajeev Sharma — *Under Secretary*

#### OFFICERS OF THE OFFICE OF C&AG OF INDIA

1. Shri P.K. Lahiri — *Dy. C&AG*
2. Smt. Rekha Gupta — *Pr. Director of Audit (Railways)*
3. Shri B.S. Gill — *Pr. Director of Audit (Northern Railway)*

#### REPRESENTATIVES OF THE MINISTRY OF RAILWAYS (RAILWAY BOARD)

1. Shri M. Ravindra — *Chairman, Railway Board*
2. Shri V. Sivakumaran — *Financial Commissioner*
3. Shri L.K. Sinha — *Member, Mechanical*
4. Shri S.K. Khanna — *Member, Electrical*

2. At the outset, the officers of the C&AG of India explained the salient points arising out of Paragraph 4.3.1 of Report of the C&AG of India for

the year ended 31 March, 1995 (No. 10 of 1996), Union Government (Railways) relating to Infructuous expenditure on Purchase of water coolers and filters. Thereafter, the representatives of the Ministry of Railways (Railway Board) were called and the Committee took their evidence on the said Audit paragraph.

3. A copy of the verbatim proceedings of the sitting was kept on record.

*The Committee then adjourned.*

**MINUTES OF THE EIGHTEENTH SITTING OF THE PUBLIC ACCOUNTS COMMITTEE (1997-98) HELD ON 13 NOVEMBER, 1997**

The Committee sat from 1500 hrs. to 1630 hrs. on 13 November, 1997 in Committee Room "B" Parliament House Annexe.

**PRESENT**

Dr. Murli Manohar Joshi — *Chairman*

**MEMBERS**

*Lok Sabha*

2. Shri Nirmal Kanti Chatterjee
3. Shri N.S.V. Chitthan
4. Dr. T. Subbarami Reddy
5. Shri Ishwar Dayal Swami

*Rajya Sabha*

6. Shri R.K. Kumar
7. Smt. Margaret Alva
8. Shri Surinder Kumar Singla
9. Shri Vayalar Ravi

**SECRETARIAT**

1. Shri P. Sreedharan — *Deputy Secretary*
2. Shri Rajeev Sharma — *Under Secretary*

**OFFICERS OF THE OFFICE OF C&AG OF INDIA**

1. Shri Vikram Chandra Pr. Director of Audit  
(Indirect Taxes)
2. Shri A.K. Thakur Pr. Director of Audit  
(Reports-Central)
3. Smt. S. Ghosh Director of Audit  
(Customs)

2. The Committee took up for consideration the following draft Reports on:

- (i) Action Taken on 113th Report of PAC (10th Lok Sabha) on Out-of-turn allotments of Government residential accommodation.
- (ii) Action Taken on 100th Report of PAC (10th Lok Sabha) on Revision in the Format of Union Government Appropriation Accounts (Civil).
- (iii) Excesses over Voted Grants and Charged Appropriations (1995-96)

- (iv) Paragraph 4.3.1 of Audit Report No. 10 of 1996 (Railways) on Infructuous expenditure on purchase of water coolers and filters.
- (v) Paragraph 1.01 of Audit Report No. 4 of 1996 (Indirect Taxes) on the Advance Licensing Scheme.

3. On the suggestion made by some members, the Committee decided to defer consideration of draft Report mentioned at serial no. (v) to 18 November 1997.

4. The Committee then took up for consideration draft Reports mentioned at serial nos. (i) to (iii). The Committee adopted the Reports at serial nos. (i) and (iii) with certain modifications and amendments as shown in Annexures I and II respectively and the Report at serial no. (ii) without any modifications/amendments. Thereafter, the Committee considered the draft Report at serial no. (iv) and after some deliberations decided to consider that draft Report further at their sitting to be held on 18 November 1997.

5. The Committee also authorised the Chairman to finalise the draft Reports mentioned at serial nos. (i) to (iii) in the light of verbal and consequential changes arising out of factual verification by Audit and present the same to Parliament.

*The Committee then adjourned.*

**MINUTES OF THE NINETEENTH SITTING OF  
THE PUBLIC ACCOUNTS COMMITTEE (1997-98)  
HELD ON 18 NOVEMBER, 1997**

The Committee sat from 1500 hrs. to 1730 hrs. on 18 November, 1997 in Committee Room "E", Parliament House Annexe.

**PRESENT**

Dr. Murli Manohar Joshi— *Chairman*

**MEMBERS**

*Lok Sabha*

2. Shri Nirmal Kanti Chatterjee
3. Shri Ramesh Chennithala
4. Shri Prithviraj D. Chavan
5. Shri N.S.V. Chitthan
6. Shri Suresh Prabhu
7. Shri V.V. Raghavan
8. Dr. T. Subbarami Reddy
9. Shri B.L. Shankar

*Rajya Sabha*

10. Shri R.K. Kumar
11. Smt. Margaret Alva
12. Shri Surinder Kumar Singla
13. Shri Vayalar Ravi

**SECRETARIAT**

1. Dr. A.K. Pandey — *Additional Secretary*
2. Shri P.D.T. Achary — *Joint Secretary*
3. Shri Rajeev Sharma — *Under Secretary*

**OFFICERS OF THE OFFICE OF C&AG OF INDIA**

1. Shri Vikram Chandra Pr. Director (INDT)
2. Smt. Rekha Gupta Pr. Director (Railways)
3. Smt. Shreela Ghosh Director (Customs)

2. At the outset, the Committee condoled the death of N.V.N Somu, Minister of State for Defence who passed away on 14 November, 1997.

3. The Committee then, took up for consideration the following draft Reports on :

- (i) Paragraph 4.3.1 of Audit Report No. 10 of 1996 (Railways) on Infructuous expenditure on purchase of water coolers and filters.



(ii) Paragraph 1.01 of Audit Report No. 4 of 1996 (Indirect Taxes) on the Advance Licensing Scheme.

3. The Committee adopted the above mentioned draft Reports with certain modifications and amendments as shown in Annexures I to II\* respectively.

4. The Committee authorised the Chairman to finalise these draft Reports in the light of verbal and consequential changes arising out of factual verification by Audit and present the same to Parliament.

*The Committee then adjourned.*

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\* Not appended.

ANNEXURE I

*Amendments/Modifications made by the Public Accounts Committee in the draft report relating to infructuous expenditure on purchase of Water Coolers and Filters*

Page	Para	Line	Amendments/Modifications
32	73	3	Substitute "view" for "belief"
33	75	19-20	Delete "at an appropriate level in the Railway Board"
34	76	6	Substitute "should have been" for "should be"
34	76	6	Substitute "were" for "are"
36	79	2 from	Substitute "conduct by" for "state of affairs
		bottom	prevalent in"
37	79	1	Insert "relating to forged documents" after "whole episode"
38	81	15	Insert "and deliberate" after "complete"
40	85	3	Substitute "serious" for "several"
40	85	13-14	Substitute "conduct" for "state of affairs"

2984/LS-1050.

**LIST OF AUTHORISED AGENTS FOR THE SALE OF LOK SABHA SECRETARIAT PUBLICATIONS**

Sl. No.	Name of Agent	Sl. No.	Name of Agent
<b>ANDHRA PRADESH</b>		<b>UTTAR PRADESH</b>	
1.	M/s. Vijay Book Agency, 11-1-477, MvIargadda, Secunderabad-500 306.	12.	Law Publishers, Sardar Patel Marg, P.B. No. 77, Allahabad, U.P.
<b>BIHAR</b>		<b>WEST BENGAL</b>	
2.	M/s. Crown Book Depot, Upper Bazar, Ranchi (Bihar).	13.	M/s. Madimala, Buys & sells, 123, Bow, Bazar Street, Calcutta-1.
<b>GUJARAT</b>		<b>DELHI</b>	
3.	The New Order Book Company, Ellis Bridge, Ahmedabad-380 006. (T.No. 79065)	14.	M/s. Jain Book Agency, C-9, Connaught Place, New Delhi, (T.No. 351663 & 350806)
<b>MADHYA PRADESH</b>		15.	M/s. J.M. Jaina & Brothers, P. Box 1020, Mori Gate, Delhi-110006. (T.No. 2915064 & 230936)
4.	Modern Book House, Shiv Vilas Place, Indore City. (T.No. 35289)	16.	M/s. Oxford Book & Stationery Co., scindia House, Connaught Place, New Delhi-110 001. (T.No. 3315308 & 45896)
<b>MAHARASHTRA</b>		17.	M/s. Bookwell, 2/72, Sant Nirankari Colony, Kingsway Camp, Delhi-110 009. (T.No. 7112309).
5.	M/s. Sunderdas Gian Chand, 601, Girgaum Road, Near Princes Street, Bombay-400 002.	18.	M/s. Rajendra Book Agency, IV-DR59, Lajpat Nagar, Old Dobule Storey, New Delhi-110 024. (T.No. 6412362 & 6412131).
6.	The International Book Service, Deccan Gymkhana, Poona-4.	19.	M/s. Ashok Book Agency, BH-82, Poorvi Shalimar Bagh, Delhi-110 033.
7.	The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-400 001.	20.	M/s. Venus Enterprises, B-2/85, Phase-II, Ashok Vihar, Delhi.
8.	M/s. Usha Book Depot, Law Book Seller and Publishers' Agents Govt. Publications, 585, Chira Bazar, Khan House, Bombay-400 002.	21.	M/s. Central News Agency Pvt. Ltd., 23/90, Connaught Circus, New Delhi-110 001. (T.No. 344448, 322705, 344478 & 344508).
9.	M&J Services, Publishers, Representative Accounts & Law Book Sellers, Mohan Kunj, Ground Floor, 68, Jyotiba Fuele Road Nalgaum, Dadar, Bombay-400 014.	22.	M/s. Amrit Book Co., N-21, Connaught Circus, New Delhi.
10.	Subscribers Subscription Service India, 21, Raghunath Dadaji Street, 2nd Floor, Bombay-400 001.	23.	M/s. Books India corporation Publishers, Importers & Exporters, L-27, Shastri Nagar, Delhi-110 052. (T.No. 269631 & 714465).
<b>TAMIL NADU</b>		24.	M/s. Sangam Book Depot, 4378/4B, Murari LaL Street, ansari Road, Darya Ganj, New Delhi-110 002.
11.	M/s. M.M. subscription Agencies, 14th Murali Street, (1st Floor), Mahalingapuram, Nungambakkam, Madras-600 034. (T. No. 476558)		