

71

**PRODUCTION OF AN ARMoured
VEHICLE 'Z', ITS GUN AND
AMMUNITION**

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MINISTRY OF DEFENCE

**PUBLIC ACCOUNTS
COMMITTEE
1993-1994**

TENTH LOK SABHA

**LOK SABHA SECRETARIAT
NEW DELHI**

SEVENTY-FIRST REPORT
PUBLIC ACCOUNTS COMMITTEE
(1993-94)

(TENTH LOK SABHA)

PRODUCTION OF AN ARMOURED VEHICLE 'Z',
ITS GUN AND AMMUNITION

MINISTRY OF DEFENCE



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LOK SABHA SECRETARIAT
NEW DELHI

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Corrigenda to the 71st Report of the Public Accounts Committee (10th Lok Sabha)

<u>Page</u>	<u>Para</u>	<u>Line</u>	<u>For</u>	<u>Read</u>
10		7 (Para)	'20'	'29'
13	39	4	'constrained'	'constrained'
16	54	2	'anctioned'	'sanctioned'
	56	2	'manufactured'	'manufacture'
	59	12	'import'	'imported'
	60	10	'utgo'	'outgo'
2		18	'manufacturer'	'manufacture'
10	col 4	4	'ndian'	'Indian'
31	col 4	1	'examina ion'	'examination'
32	col 4	7	insert after 'for'	'import of'
		8	'import'	'imported'

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PART II*

Minutes of the sitting of the Public Accounts
Committee held on 17 March, 1993 and
13 April, 1994.

* Not printed (one cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

PUBLIC ACCOUNTS COMMITTEE
(1993-94)

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* Ceased to be a Member of the Committee on completion of her tenure in Rajya Sabha w.e.f. 2 April, 1994.

INTRODUCTION

1. I, the Chairman of the Public Accounts Committee do present on their behalf this Seventy-first Report on Paragraph 33 of the Report of the Comptroller and Auditor General of India for the year ended 31 March, 1991, No. 8 of 1992, Union Government (Defence Services—Army & Ordnance Factories) relating to production of an armoured Vehicle 'Z', its gun and ammunition.

2. The Report of the Comptroller and Auditor General of India for the year ended 31 March, 1991, No. 8 of 1992, Union Government (Defence Services—Army & Ordnance Factories) was laid on the Table of the House on 13 May, 1992.

3. In this Report the Committee have found inordinate delay in the completion of armoured vehicle 'Z' project resulting thereby cost and time overrun, besides several other shortcomings/irregularities in the execution of project. These mainly related to the inadequacies in project planning, under utilisation of capacity, extra expenditure due to avoidable imports, irregularities in the execution of civil works, etc. The Public Accounts Committee have time and again commented upon the inordinate delay in the execution of important defence projects. In their 58th Report (Tenth Lok Sabha) the Committee had recommended that the Ministry of Defence should have a fresh look at the functioning of the mechanism for monitoring the progress in the execution of important defence projects to make it more effective. The Committee have desired that the Ministry of Defence while reviewing the mechanism should also make use of the facts brought out in this Report as useful inputs in the process.

4. The Committee have been distressed to find that the project originally scheduled to be completed by May, 1989 has been completed in March 1994. Expressing surprise over the plea taken by the Ministry at this stage that the original time schedule of two years for a project of this magnitude was ambitious, too tight and unrealistic, the Committee are of the view that this is clearly indicative of the lack of proper planning and also of the fact that the targets fixed are not such as are capable of achievement. Further, considering the fact that project had been completed after a lapse of seven years as against the target of two years clearly shows laxity in the execution of the project. The Committee have taken a serious view of such delays in the execution of projects particularly those involving defence preparedness of the country.

5. The Committee have noted that as per the Project Report, production of the armoured vehicles was to commence from 1987-88 onwards. According to the original schedule, 200 vehicles were to be produced by 1989-90, out of which the first 50 vehicles valuing Rs. 63.86 crores were only to be assembled from imported CKDs. The Committee have, however, found that the entire production of 175 vehicles during this period was by assembly with imported CKDs, excepting a few components machined/fabricated at the factory, resulting avoidable import of CKDs valuing Rs. 270.75 crores. The Committee have noted with regret that the delay in the completion of the project had led to an avoidable outgo of precious foreign exchange of sizeable magnitude.

6. Further, the Committee have noted that a Project for manufacture of gun 'P' and 'Q' sanctioned on 15 November, 1988 at a cost of Rs. 19.70 crores, was scheduled to be completed by 14 November 1990 but could be completed only in 1993, after a delay of 3 years. The requirements of guns and ammunitions for the armoured vehicle 'Z' assembled at the factory during this period had been met either through direct import alongwith armoured vehicle or as CKD assemblies thereby rendering additional expenditure. The Committee have regretted to point out that had there been proper planning to synchronise production of guns and ammunitions to that of armoured vehicle 'Z', avoidable additional expenditure incurred in terms of foreign exchange on imports could have been avoided.

7. The Committee (1992-93) examined audit Paragraph 33 at their sitting held on 17 March, 1993, The Committee considered and finalised the Report at their sitting held on 13 April, 1994. Minutes of the sittings form Part II* of the Report.

8. 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 been reproduced in a consolidated form in Appendix II to the Report.

9. The Committee would like to express their thanks to the Public Accounts Committee (1992-93) for taking evidence on Paragraph 33 and obtaining information thereon.

10. The Committee would also like to express their thanks to the officers of the Ministry of Defence for the cooperation extended to them in giving information to the Committee.

11. 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;
April 25, 1994

Vaisakha 5, 1916 (Saka)

BHAGWAN SHANKAR RAWAT,
Chairman,
Public Accounts Committee.

* Not printed (one cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

REPORT

The Report is based on Paragraph 33 of the Report of the Comptroller and Auditor General of India for the year ended 31st March, 1991—No. 8 of 1992, Union Government, (Defence Services-Army & Ordnance Factories) relating to production of an armoured vehicle 'Z', its gun and ammunition which is appended as Appendix-I.

Introductory

2. Army Headquarters based on the extensive trials in 1979 on certain imported armoured vehicle 'Z' and envisaging the more advanced tanks to come into being in future recommended the induction of armoured vehicle 'Z' into the Indian fleet till such time the indigenously developed armoured vehicle 'M' is fully proved and productionised. The Cabinet Committee on Political Affairs in June, 1981 while approving the proposal of Army Headquarters directed the Ministry of Defence to explore the possibility of manufacturing these tanks within the country under licence from some foreign supplier. Accordingly, the Ministry of Defence in July, 1982 concluded an agreement with the foreign supplier/collaborator for licence and technical knowhow on payment of Rs. 45.59 crores as licence fee, for manufacture of certain number of 'Z' tanks indigenously.

Execution of Projects

3. It was decided by the Government to produce the armoured vehicle 'Z' on the transfer of technology by the collaborator at the factory 'A' by augmenting the existing facilities created at the factory for production of another vehicle 'X' which was to be gradually phased out after mid eighties and by taking assistance from other ordnance factories for opto-electronic and armament items. Assistance was also to be taken from certain Public Sector Undertakings for communication systems, armour plates etc. The approved cost of the project for manufacture and assembly of certain number of vehicles per annum as sanctioned in April 1987 was estimated at Rs. 503.75 crores involving foreign exchange component of Rs. 149.15 crores and the scheduled date for completion of the Project was expected in two years' time i.e. by May, 1989. Being a time-bound project the trickle production was expected from 1987-88 and the peak production during 1991-92.

Plant and Machinery

4. The total number of plant and machinery required for the project as per detailed Project Report was estimated at 2008 costing Rs. 356.47 crores. Out of the 2008 machines 1380 machines were considered as essential for the commencement of production and upto September, 1987

orders were placed for 1317 machines worth Rs. 273.9 crores and 1302 machines were received and 1255 machines commissioned.

5. When asked to furnish the reasons for delays in erection and commissioning of machines, the Ministry of Defence in a note stated:

“A review of the actual requirement of the number of machines was undertaken and this process took sometime to complete. The ordering of the machines could be undertaken only after this process was completed. As the machines that were ordered were highly sophisticated in nature, there were inevitable delays in the receipt of some of the machines and in the erection and commissioning. Some of the specific factors which led to the time over-run in the project completion are:

- (i) Some critical machines (43 in number) were held up for supply due to export restrictions imposed by some of the countries. Of these 43 machines, 26 number of machines were received late after much persuasion at Government and other levels. 17 machines could not be obtained and alternative arrangements had to be made at a late stage leading to an unavoidable delay in the project.
- (ii) 8 major and critical machines were erected by M/s. PAL and M/s. HMT with Joint Working arrangements and foreign partners. These did not materialise as the foreign partners did not go through with the Joint Working arrangements. The Indian suppliers had to look for other partners which resulted in considerable delay.
- (iii) In terms of the Government policy obtaining at that time, no dealings were permitted with Indian Agents. Consequently, all contacts had to be established with variety of suppliers directly and this process contributed to delay. The professional services given by the Indian agent in erecting and commissioning could not also be availed of. Getting the foreign suppliers to send their engineers for this purpose for such large number of machines to attend to problems arising during erection also contributed to delay.
- (v) Apart from the above major reasons, there were some minor irritants like transit damage to some machines (3), replacement of parts damaged during commissioning and sheer complexity of the machines giving rise to problems at the time of erection and commissioning. The latest position with regard to ordering erecting and commissioning of the machines is as under:

No. of machines ordered	...	1360
No. of machines received	...	1343
No. of machines erected	...	1331
No. of machines commissioned	...	1294

A review is being undertaken to see if the balance 21 machines would need to be ordered at all, in the context of the reduced load on the factory.”

6. On being asked as to the number of machines received upto September 1991 that were not erected within stipulated period of 3 months from the date of receipt and not commissioned thereafter within another 3 months, the Ministry stated:

“Out of 1302 machines received upto September 1991 only six machines could not be erected within the scheduled period of three months i.e., upto December 1991 of which 5 were imported and one indigenous.

Number of machines not commissioned thereafter within another three months i.e., upto March 1992 are 22 comprising 10 imported and 12 indigenous machines.”

7. When asked to give the latest position about the completion of the project and the number of machines installed/commissioned in respect of the Armoured Vehicle ‘Z’ project, the Ministry in a note dated 6.4.1994 stated as under:

“(i) Number of machines actually commissioned	...	1359
(ii) Date of actual Commissioning	...	March’94

Further, the Ministry have also stated that the balance 21 (1380—1359) machines were not considered for procurement on review at present level of production.”

Cost of the Project

8. The sanctional project cost of Rs. 503.75 crores included Rs. 412.25 crores for purchase and installation of machinery. As per the detailed Project Report the total number of plant and machinery required was estimated at 2008 costing Rs. 356.47 crores involving foreign exchange component of Rs. 148.56 crores. Audit had revealed that out of the 2008 machines required for the project, 628 machines costing Rs. 114.48 crores approximately was decided not to be procured thus bringing down the approved project cost to Rs. 389.27 crores. Thus the time over run has resulted in a cost over run of Rs. 74.13 crores.

9. When the Committee wanted to know the reasons for cost over-run during evidence, the Secretary, Department of Defence Production and Supplies stated as follows:

“We are not able to understand the computations which the Audit has made. Our perception differs from that of the Audit. The decision was that there were to be 2008 machines to be included when the project was sanctioned. As we went along and better machines and multipurpose machines became available, in the mid-term we reduced this; finally it was felt that we want 1,380 machines

only. This figure has been further reduced to 1360. So we are only going to have 1,360 machines and not 2,008."

Elaborating further the Secretary (DP&S) added:

"The total money provided is Rs. 356 crores for plant and machinery and Rs. 56 crores for tools, jigs and equipment; that is Rs. 412 crores in all. Actually what we have spent is only Rs. 340.17 crores. What audit seems to have done is that they have taken into account that 628 machines have not been ordered and therefore, on a pro-rata basis they have computed their price as Rs. 114 crores (Rs. 356.46 divided by 2,008 and multiplied by 628). The manner of computation is quite untenable because the machines actually obtained were in many instances different from those projected and because all machines do not carry equal price. They have deducted Rs. 114 crores from the total project cost of Rs. 503 crores and arrived at a figure of Rs. 389 crores as the authorised cost of the project actually implemented. They have observed that as against that the cost actually incurred has been Rs. 463 crores. The correct figure of actual expenditure is something else. By September, 1993 we are going to spend Rs. 431 crores only."

10. The Committee further enquired whether the position about the error and wrong computation done by the audit was clarified in writing to them.

The Secretary (DP &S) stated:

"There was a flaw in communication. I must admit this. Now that we were asked to appear before the Committee, we have ascertained the correct position. The fact of the matter is that the actual figures are as explained above."

11. Further, during the course of evidence, the Committee were given to understand that the draft audit Para was received by the Ministry in July 1991. When asked specifically as to why the audit was not informed of the alteration, the Secretary (DP&S) stated:

"Some comments were given. But since this matter of computation of audit was not clear, probably it was not explained in such a pointed manner, as I am doing today."

12. When asked to furnish a comprehensive information regarding the projected cost at the time when project was visualise, the estimated and actual expenditure incurred/proposed to be incurred on the project, the Ministry of Defence in their note while giving the position as on 31.3.1993 stated:

"As against the Govt. sanction of Rs. 503.75 crores (FE: Rs. 149.15 crores), the actual expenditure incurred for procurement of plant & machinery as well as Civil works till 31.3.1993 is Rs. 388 crores (including FE to the tune of Rs. 76.41 crores). The anticipated

expenditure for the project completion based on 1360 machines ordered works out to Rs. 431 crores approximately including a FE element of Rs. 79.66 crores. Hence, there is no cost over-run with reference to Govt. sanction.

Summary:

Description	Govt. Sanction	Expenditure Till 31.3.93	Anticipated Expenditure
1. Civil Works	91.50	87.66	91.00
2. Plant & Machinery	356.46	287.18	309.59
3. Equipments	55.79	13.19	30.58
Total :	503.75	388.03	431.17

At the time of reducing the number of machines a comprehensive review of actual requirement was made. Opportunity was taken at that time to upgrade and introduce machines with multifarious functional capabilities so that a number of machines from original list could be deleted. This was done at a total cost which was much below the sanctioned amount.

In addition recurring expenditure on man-power has also been reduced as more number of machines would have entailed more man-power. However, the capacity of the plant was retained at the envisaged level. Thus it can be seen that not only there has been no cost over-run in this project but a definite cost saving has been achieved."

13. However, in a subsequent note furnished to the Study Group of the Committee during their visit to the factory 'A' in July 1993, the Ministry while giving the factual assessment indicated the status of expenditure as under:

Description	Govt. Sanction	Expdr. till 31.3.93	Value (Rs. in crores)	
			Expdr. as on 30.6.93	Anticipated expendr. for compln. of project
1. Civil Works	91.50	87.66	87.73	88.00
2. Plant & Machinery	356.46	287.18	292.87	309.59
3. Equipments	55.79	13.19	13.40	27.00
Total Expdr.:	503.75	388.03	394.00	424.59

Anticipated savings: Rs. 79.16 crores (Rs. 3.5 crores in Civil + Rs. 75.66 crores in P&M)

"Thus, no cost over-run is anticipated on the completion of the project inspite of market trends and exchange rate variations. On the other hand, there will be a saving."

Delay in completion of Project

14. Audit paragraph has revealed that in terms of Government sanction the project was scheduled to be completed by May, 1989. But, due to delay in ordering, receipt and commissioning of the plant and machinery the project was expected to be completed by March, 1992 resulting a time over-run of almost three years in completion of the project.

15. During evidence when asked about the specific reasons for the delay in completion of the project, the Secretary, Defence Production & Supplies (DP&S) stated as follows:

"I have to admit that there have been delays..... There has been time over-run in the sense that the project was sanctioned in 1987 and then it was scheduled to be completed by 1989. But, we have taken a longer time to complete it. Now, it is complete except for some very marginal elements. We sincerely feel that two years was a very ambitious time frame. It has taken longer time and that technically there has been a time over-run. This is one of the projects which has been implemented rather efficiently."

16. The Ministry of Defence, in a note subsequently furnished to the Committee, elaborating further the reasons for the delay in completion of Project stated as follows:—

"A tight time frame was kept to put a great pressure on the project authorities to complete the project as expeditiously as possible. The time schedule of two years for a project of this magnitude was too tight and unrealistic and the reasons for time over-run as comprehensively brought out by the audit para itself were:

- delay in concluding contracts, slow start and slow progress in evaluation of order placement.
- delay in clearing cases beyond Ordnance Factory Board (OFB)/ Additional Director General Ordnance Factory (ADGOF)'s powers.
- embargo on dealing with Indian agents for imported plant and machinery.
- difficulties created on account of embargo imposed by foreign Government on export of high technology equipment for Defence industries.
- delay in identification of public sector undertaking as a source for certain machinery items which were earlier considered for import.
- re-tendering necessitated by failure of joint working arrangement between foreign collaborator and Indian suppliers.
- need for examining sophisticated technology like robotising in certain cases like material handling and welding equipment.
- delayed supplies, erection and commissioning of plant and machinery."

The Ministry also indicated that the project was expected to be completed by September, 1993.

Civil Works

17. According to Aduit Paragraph, the main production buildings were completed between February 1987 and August 1988 in phase at a cost of Rs. 91.74 crores (March 1991) against the sanctioned cost of Rs. 91.50 crores. However, during the execution of civil works avoidable expenditure were incurred in certain cases, which could have been easily avoided. These are discussed in the succeeding paragraphs.

Diversion of underground pipe line

18. According to audit a contract for Rs. 2.16 lakhs was concluded by the Garrison Engineer (GE) in May 1985 for diversion of an existing water supply mains to another route in a station. This work involved relaying of 2722.5 metres of pipe line which was completed in November 1985 at a cost of Rs. 17.09 lakhs. The re-routing of pipe lines was lacking justification and resulted in a further extra expenditure.

19. When asked as to what were the defects in planning/project report preparation that led to diversion of pipe lines, the Ministry of Defence in their reply stated:

“It was decided to set up facilities for the manufacture of Vehicle ‘Z’ as an extension to the existing Factory ‘A’. As land was not available in the existing Factory for this purpose, Army land adjacent to Factory ‘A’ was identified as most suitable for setting up new facilities and this land was taken over by OFB from the Army. It was found that there was an Army pipeline feeding an Army installation traversing the land so taken over. As this was obstructing the Factory facilities, this had to be diverted out of the Factory facilities. Army authorities were requested to divert their pipeline accordingly. It was agreed to by OFB that the cost of diversion will be met out of the project funds. GE who provides works services to the Army has diverted the pipeline and raised a debit of Rs. 17.09 lakhs (total cost including the cost of pipes) against the project. Since it was the only vacant land available which was suitable for the project, there was no defect in planning/project report preparation.”

20. When enquired about the basis on which the GE accorded technical sanction for diversion of existing water supply mains to another route and whether the technical sanction was obtained on the basis of site conditions, the Ministry of Defence stated:

“The technical sanction for diverting part of the existing supply mains was accorded properly by the GE. The amount of contract does not include cost of pipes, which are issued to the contractor free of cost, after procuring the same by the department through DGS&D rate contract. This is a standard practice in MES. The value of contract

mainly represents only the cost of labour. The total cost of work includes cost of pipes as produced departmentally and issued to contractor for laying, jointing & commissioning and the value of contract which is exclusive of cost of pipes. Garrison Engineer had accorded Technical sanction after detailed survey and estimation."

21. When asked further as to what would have been the cost of supply and laying of 2722.5 metres of pipe line in that area instead of diverting the existing water supply mains, the Ministry in their note stated:

"Diverting the existing water supply mains is by means of laying a new line by a new route. Therefore, cost of both would be same, except for some credit for very old wornout pipe line. The cost of new pipe line for 2722.5 metres would be Rs. 17.09 lakhs at 1984-85 rates."

22. Further, it is seen from the audit para that the contractor who was entrusted with the work of pipe line diversion had informed the GE in August 1988 about the theft of some pipes from the area where he had carried out excavation for rechecking the lead contents. Pipes were again reported to have been stolen in October 1988. The total cost of the pipes so stolen amounted to Rs. 5.00 lakhs and two persons were apprehended in this connection.

23. Asked as to what were the details of the security arrangements actually provided and the steps taken to ensure that proper guard was mounted, the Ministry in reply stated:

"The work of diversion of water supply main was completed by the contractor on 30.11.85 and taken over by Garrison Engineer and as such the thefts that took place in 1988 have got nothing to do with the planning or execution of the project. The security of this Army pipeline is not the responsibility of the project authorities. No security arrangements are practicable for such cross-country pipelines. The theft was formally and properly investigated by a Staff Court of enquiry appointed by the Station Commandor (AOC). Court of enquiry held that no one was to blame and recommended loss (Rs. 5 lakhs) to be borne by the State. Loss statement is under processing by MES through the Army authorities. Loss is not connected with the implementation of the Project."

24. When asked as to what steps were taken by Military Engineering Services (MES) to safeguard the Government property, the Ministry in a note stated:

"Defence properties within a boundary wall or fencing are only regularly guarded. The existing pipe line where the theft occurred was not within fencing or boundary wall at the time theft occurred. It was an open vacant area. There is no system of guarding cross country pipe lines and over Head Electric supply lines; neither it is

generally feasible nor economical. Further, the security of the pipe line is not the responsibility of the project authorities.”

25. The Committee further wanted to know as the diversion work was executed by GE, was not the responsibility to take all precautions for protecting the public property against theft also lies with GE even though the property belonged to MES. The Ministry stated in a post evidence note:

“External services are laid cross country within the military stations and cantonment areas. Other than general supervision these assets are not provided any specific watch and ward as is provided for the building assets and Govt. stores. It may not be appropriate to contend that the external services e.g. overhead/underground lines and mains extending over many kilometers could be physically guarded.”

Import of Steel

26. According to audit para, a review conducted by the Ministry of Defence in November 1987 indicated a total requirement of 44638 tonnes of Steel for the project against which 14553 tonnes costing Rs. 11.30 crores were imported and received between March 1986 and July 1987. Audit further revealed that 4506 tonnes of imported Steel mainly 4014 tonnes of MS rods and twisted bars costing Rs. 60.05 lakhs was not at all used on the project.

27. According to the Ministry of Defence the import of steel was not due to any special quality of steel required. The import was due to non availability of steel items within the country in the required quantity during that period. There was tremendous shortage of reinforcement bars during that period. The Iron and Steel Controller after examining the case approved the import of MS Bars and CTD Bars which were imported through MMTC.

28. While giving the reasons for import of 4506 tonnes of additional steel which could not be utilised on the project, the Ministry of Defence further stated:

“Being a time bound project, the entire requirement of steel against this project was projected on the Joint Plant Committee (JPC) which was the only nominated agency for allocation of steel for Government work. This indent also included the steel required for married accommodation which was included in the scope of the project approved by the CCPA but was subsequently not considered for sanction on grounds of economy in man-power. As per Govt. policy obtaining at the point of time, JPC allocated steel both structural and reinforcement bars, ex-imports.

Reduction in scope of work on account of deletion of married accommodation from the project resulted, in accumulation of

surplus steel which includes 4506 MT of imported Steel as observed by the audit authorities. The Surpluses have accrued not on account of over provisioning. These surpluses have since been liquidated to a large extent by utilising the steel in other projects. At present, surplus steel held is 487.64 MT only, which will be utilised in the future projects.”

20. On being asked to furnish the information relating to the procurement of total quantity of Steel required for Armoured Vehicle ‘Z’ the Ministry of Defence in their reply further clarified the position as follows:

“The project sanctioned by the Government included construction of 2985 residential quarters for the workers as envisaged in the DPR. A Go-Ahead sanction for the project was accorded in Jan. 84 as amended from time to time till Oct. 86 pending accord of regular Adm. approval.

Steel is one of the main construction material for the construction of the project. The requirement was of the order of 44638 MT which included the reinforcement bars and structural steel. Indents were placed on the JPC during Dec. 84 for 32,089 MT. JPC had authorised import of 14,290 MT of steel and the quantity of imported steel actually received was 14553 MT. Out of above, quantity actually used was 10,047 MT and thus there was a surplus of 4506 MT.

The reinforcement steel included MS/CTD bars required for the married accommodation which was a part of the sanction and for which estimates were submitted for issue of Admn. approval. While all the phases of the project got sanctioned in due course, the adm. approval for residential accommodation was held back as the Ministry raised the basic issue of the need for sanctioning additional manpower. Ultimately by February 1989 it was decided that no additional manpower would be sanctioned and consequently the adm. approval for the residential accommodation was not accorded.

Against the total quantity of steel procured from imports, through MMTC based on release by the JPC, 4506 tonnes became surplus due to deferment and finally nonaccord of approval of married accommodation, sub-project. This comprised 4014 tonnes of MS/CTD bars and 492 tonnes of structural steel. Prompt action was initiated to divert the steel to other projects.”

30. Thus according to Ministry, the accumulation of surplus Steel of 4506 tonnes was due to subsequent deletion of married accommodation from the scope of the project on grounds of economy in manpower. Asked as to when the decision was taken to delete the construction of the accommodation for married workers from the scope of the project, the Ministry of Defence stated:

“The implementation of the Project was being carried out as per goahead sanction. At the time of sanctioning the project, it was

decided that the expenditure on account of residential quarters etc. will be incurred only with prior concurrence of Ministry. It was decided by Ministry on 27.2.1989 not to accord sanction for the construction of any fresh residential quarters in addition to whatever was existing in Factory 'A' estate."

31. When asked as to who gave the clearance for import of steel to be used in construction of married accommodation, the Ministry of Defence stated:

"No specific permission from Iron & Steel Controller was sought for import of steel. Only the indents were placed on JPC/Iron and Steel Controller for allocation of steel required for the time bound project. The JPC/Iron and Steel Controller was only constantly apprised of the urgency of allocation of steel to complete the prestigious project from time to time. It was in the normal course that JPC decided to import some quantity of steel to meet with the project requirement."

32. The Committee desired to know the details of works where this avoidable imported steel had been utilised and additional expenditure incurred on transferring the excess Steel to other projects. The Ministry of defence in a note stated:

"69% of imported steel was utilised for Armoured Vehicle 'Z'. The surplus imported steel has been transferred to many stations for various types of work. These are generally married accommodation, Administration, storage type accn. and Factory sheds. The work where the imported steel was used are such that indigenous steel also could have been used. The total expenditure incurred in transportation of the surplus steel is Rs. 16.17 lakhs."

33. On being enquired further with regard to the position of utilisation of the remaining surplus steel, viz. 487,64 MT, Ministry of defence in their post evidence note stated:

"As on date all the MS/CTD bars have been utilised in full in other projects. Presently, stock of this variety of steel is nil. Out of the structural steel 17.703 tonnes is awaiting disposal."

Production and Capacity Utilisation

34. According to audit within a period of one year from the sanction of the project was issued in April 1987, based on the DPR of July 1985, the production schedules were modified in March 1988 after taking into account the availability of various inputs materials for critical items and discussion with Collaborator.

35. On being asked by the Committee to furnish the details of original production schedule fixed and modified from time to time, actual production achieved of armoured vehicle 'Z' since the commencement of production, the Ministry of Defence while attributing the reasons for the

modification in production schedule to delayed receipt of CKDs from collaborator, non-receipt of product support for critical items, budgetary constraints and delay in availability of critical items from collaborators and trade sources, have furnished the following details:

Year	Original Schedule	Revised Schedule	Production achievement
86—87	16	—	—
87—88	34	15	15
88—89	50	85	85
89—90	100	75	75
90—91	150	125	111
91—92	200	125/72	72
92—93	200	80	80

36. In reply to another question as to how far the production was likely to be achieved for this modified schedule, the Ministry stated that for the year 1992-93 a target of 80 vehicles was indicated in June, 1992 due to budgetary constraints. The achievement of this target was contingent upon timely receipt of the critical systems from the collaborator/3rd countries and from trade sources.

37. Asked further as to what action was taken subsequently in the light of the experience gained to ensure that critical systems are received at the earliest and progress of the project not hampered further, the Ministry of Defence stated:

“The achievement of target of 80 vehicles during 1992-93 was contingent upon receipt of a number of codes/systems from trade. Since in a few cases the indigenous suppliers could not satisfactorily establish the system these were projected on both collaborator and 3rd countries as a contingency measure for meeting the committed target. Since the schedules quoted for supply of some of these items by collaborators/3rd countries were not commensurate with the production requirements, certain delays became inevitable in the actual receipt of critical systems from these sources. These items have since been received. Some of the Indigenous supplies also materialise in the meantime as a result of intense monitoring. The target of 80 vehicles during 1992-93 has been accordingly met.”

38. The production target of armoured vehicle ‘Z’ for 1989-90 was reduced in December, 1989 due to uncertainty in supply of certain finished parts by the foreign supplier as well as the deficiencies against the supplies of CKDs by the collaborator. Similarly the targets from 1990-91 onwards

were also reduced as Army indicated in February, 1990 a requirement of lesser number of vehicles per annum upto 1994-95 owing to budgetary constraints.

39. The Committee enquired to know as to what was the total requirement of vehicles to the Army, the Secretary (DP&S) during the evidence stated:

“The Army’s requirement is also contrained by the funds at their disposal.”

40. The Committee enquired the procedure being followed in transferring and accounting of armoured vehicles to Army, the Secretary (DP&S) explained:

“Give and take between Ordnance factories and Army is not a merely book entry. What happens in the Army Budget is that there is a particular amount which is allotted for issues from the Ordnance factories. In other words that defines the quantity which the Army can draw from the OFB. OFB also works on no-profit no-loss basis.”

He further added:

“The issue from the Factory to the Army had to be on the basis of fund supported indent. If fund supported indent cannot be given in a particular financial year and it can be given only at the beginning of the next financial year, then the delivery of the vehicle is made accordingly.”

41. When asked as to what modification in production schedule was envisaged in view of the reduced demand by the Army, the Ministry of Defence stated:

“A proposal for undertaking overhaul of the Vehicle ‘Z’ within the existing facilities with nominal additional investment for balancing the technological needs is under examination. One vehicle ‘Z’ has already been taken up for overhaul study and familiarisation with regard to process of overhaul, this being entirely different from OE manufacture.

In addition to the above, inhouse R&D activities for Vehicle ‘X’ Repowering are about to yield results. This will also provide adequate load for modifying the existing fleet of Vehicle ‘X’.

The Factory has also developed Bridge Layer Tank ‘KARTIK’. besides the Factory can undertake manufacture of next generation of Tank if so desired by the Army. The specification of Plant and Machinery are such that they can absorb the Design changes and improvements in Equipments and variants. Besides spares requirement of all type of ‘A’ vehicles will be met.”

42. The Committee enquired to know the basis for fixing the production capacity of the factory at 200. In reply the Secretary (DP&S) stated:

“They had, at that time, a certain force level in view. They had in view their existing holdings, the time schedule of their phasing out and so on. Based on that, they had worked out a required production capacity of about 200. This is a well-considered decision. All factors that are necessary were taken into consideration.”

43. On being asked by the Committee whether the factory was ready to produce armoured vehicles as per the capacity fixed and if so, how it was that the original scheduled figures went on varying from year to year, the Secretary (DP&S) stated as under:

“The factory is equipped to undertake production as per the capacity fixed. The assumption was that we would start trickle production of Vehicle ‘Z’ because we already had facilities there for producing other tanks. We would get CKDs and SKDs from abroad. We would produce tanks therewith and then we would deepen the indigenisation of components etc. gradually. On that basis, probably, they fixed the schedule. That is not the production programme; production programme is based on the indents.”

44. Further according to audit the Army initially placed an order for 250 vehicles in September, 1986 and an additional order of 200 vehicles in July, 1990. Factory ‘A’ assembled and supplied 175 vehicles during 1987-88 to 1989-90. Though only the first 50 vehicles were to be assembled from imported CKDs, the assembly of all the 175 vehicles with imported CKDs, excepting a few components fabricated at factory ‘A’, had resulted in avoidable expenditure of Rs. 270.75 crores. During the course of evidence the Committee enquired about the same. The Secretary (DP&S) explained as follows:—

“I would like to submit that there are a total of 99 codes a systems which constitute the entire vehicle. Out of these 99 codes four are not envisaged to be indigenised. They will continue to be based on import but 95 have to be indigenised. I am happy to say that by October 1992, we have completely indigenised 87 codes.”

45. According to the Ministry reduced off-take of armoured vehicle ‘Z’ by Army due to budgetary constraints became unavoidable. In order to utilise the installed capacity, in 1991, Ordnance Factory Board intimated the Audit that the factory had gone in for diversification of work load for optimum utilisation of plant and machinery installed by way of rendering assistance to HAL, BEML, Praga, VSSC, ISRO, ADA, Railways etc. However, the extent of utilisation was not intimated.

46. On being asked by the Committee to furnish the information about the extent of utilisation of the plant and machinery consequent on diversification of work load, the Ministry stated in their reply as under:

“When it became clear that the Army’s regular requirement of this Vehicle will not be to the extent envisaged originally, it has been decided to go in for some diversification of products. However, Ordnance Factory set-up which has been entirely dedicated to defence needs is not used to marketing in the civil sector, However, the plant and machinery has been set up with a view to producing the armoured vehicles are not easily susceptible of being used for many civil application/items. However, with these constraints, some tentative efforts have been made towards diversification by going out to sister public sector units and Depots and offering to take on additional work load on their behalf. This effort has fructified to some extent and the Factory ‘A’ was able to execute some orders for the others such as Praga tools, VSSC, HAL, BEML, Railways, ADA. Over and above these additional works for production series of GLT Kartik (Bridge Layer Tank), BLT on Ajeya, Vehicle ‘X’ Repowering, Overhaul of Ajeya were completed. With the experience gained in this filed, now more serious efforts are being undertaken to get into the civil market in a major way. Video films of the capacity set-up in Factory ‘A’, brochures containing the details of the facilities and capabilities have been made in a determined marketing effort. Diversification is necessary a slow process. It is hoped that in the course of time, the spare capacity available at Factory ‘A’ would be put to greater use by supplying products to civil sector.”

47. The Committee during the course of evidence enquired whether there was any demand for the Armoured vehicle from collaborators side and if so, the proposals. The Secretary (DP&S) stated:—

“If there is an export opportunity then we would welcome it. But it has to be kept in view that we are producing under the licence from collaborator.”

48. The Committee further enquired to know whether the Ministry had got any kind of plan or worked out the possibility of exploring the market potential in foreign countries for export of the armoured vehicle ‘Z’, in reply, the Secretary (DP&S) stated:

“That stage has not yet reached but we are on the look out.”

He further added:

“We are serious about exports. But exports are limited by various factors. We have to make an entry in a very competitive world in a situation in which the defence spending is contracting everywhere. Secondly, we are limited in terms of licences. Thirdly, we also have

to keep out strategic and political considerations in mind in making exports. So, constrained by these factors, we are doing our best in making efforts.”

Monitoring of Project

49. A Steering Committee was constituted for issuing necessary guidelines for implementation of the project. Similary, separate Working Groups on armour vehicle, engine, armament, ammunition, civil works and services etc. were contituted to monitor the project execution in specific areas and to ensure intraction and coordination amongs various agencies involved. These Working Group were to look into areas of bottleneck and issues that affected the progress of project and at the same time to endure to resolve them. Accoding to audit these Working Groups which were to meet atleast once in a quarter, met between 7 to 18 times only between February, 1983 to March, 1991 as against 28 envisaged meetings for each group. Similarly, the Steering Committee during the above period met only 13 times against envisaged 49 meetings.

50. On being asked as to whether the delay in ordering receipts and commissioning of plant and machinery were due to inadequate monitoring at higher levels, the Ministry in reply *inter-alia* stated that the implementation of plant and machinery was monitored closely and frequently daily, weekly and fortnightly basis and hence the project did not suffer due to lack of monitoring.

Arms for the Vehicle

51. The project for manufacture of guns ‘P’ and ‘Q’ for armoured vehicle ‘Z’ was sanctioned on 15 November, 1988 at a cost of Rs. 19.70 crores including foreign exchange component of Rs. 13.65 crores. As per the Government sanction the Project was originally estimated to be completed within a period of two years from the date of sanction *i.e.* by 14 November, 1990. As the MES, responsible for the civil works, had indicated time-frame of 184 weeks *i.e.* more than 3½ years for completion of civil works, the project completion date was revised and rescheduled for completion by November, 1992.

52. During evidence the Secretary (DP&S) stated that the Project was to be completed by March, 1993 and substantial portion of it had already been completed.

53. When asked whether the Project had since been completed and if so, at what cost. The Ministry of Defence in a post evidence reply stated:

“The Project has since been physically completed. Financial closure is yet to be done. The anticipated cost is Rs. 1957.30 lakhs. There is no cost over-run.”

Ammunitions

54. According to Audit para the ammunition project for gun ‘Q’ nctioned in June 1988 at a cost of Rs. 538.47 lakhs at Factory ‘C’ has

commenced production in 1991. However, to meet the requirements pending start of production, CKDs for 6 lakhs rounds of the ammunition (variety 'A': 4.80 lakhs and variety 'B': 1.20 lakhs) were imported from the collaborator in 1987 and 1988 at a cost of Rs. 135.46 lakhs. The Ammunition project for gun 'P' had not been sanctioned as adequate stock of this ammunition ex-import was available.

55. When asked how the requirements of gun and ammunitions for the armoured vehicle 'Z' assembled/manufactured at the factory 'A' had been met and at what additional cost, the Ministry stated in their post-evidence note:—

“Most of the requirements have been met either through direct import along with armoured vehicle or as CKD assemblies. Full scale indigenous production using indigenous material is yet to be established. Cost comparison between indigenous product and import is, therefore, not available.”

56. Further asked as to why proper planning was not done to achieve the synchronization of the indigenous manufactured of these items with that of the armoured vehicle 'Z', Ministry stated:

“The project was formulated along with the project formulation for Vehicle 'Z'. However, project cost, of Rs. 38.29 crores was considered to be very high. Efforts were made to redefine scope of project by off-loading certain items to civil trade. The project cost was brought down to Rs. 19.70 crores. This process took some time and hence the project for the gun came up later than the Vehicle 'Z' project.”

57. The Committee note that based on extensive trials in 1979, the Army Headquarters recommended the induction of Armoured Vehicle 'Z' into the Indian fleet to be used as interim vehicle pending production of an indigenously developed armoured vehicle 'M'. The Cabinet Committee on Political Affairs (CCPA) while approving the proposal in June, 1981 had directed the Ministry of Defence to explore the possibility of manufacturing these vehicles in the country under licence from the foreign supplier. Accordingly, in July 1982, the Ministry of Defence concluded an agreement with the foreign supplier for licence and technical know-how for indigenous manufacture of certain number of vehicles on payment of a licence fee of Rs. 45.59 crores. It was decided to produce the vehicle 'Z' at Factory 'A' by augmenting its existing capacity and after transfer of technology by the Collaborator. The project was sanctioned in April 1987 with an estimated cost of Rs. 503.75 crores including foreign exchange component of Rs. 149.15 crores. The planned date of completion of the project was May 1989 and peak production was expected to be achieved during 1991-92. The project was strictly a time bound one and trickle production was expected from 1987-88. The Committee's examination of the Audit Review has

revealed several shortcomings in the implementation of the project which are dealt with in the succeeding paragraphs.

58. The Committee are distressed to find that the project originally scheduled to be completed by May, 1989 has been completed in March, 1994. The Ministry of Defence (Deptt. of Defence Production & Supplies) attributed the delay *inter-alia* to the delay in ordering, receipt and commissioning of the plant and machinery. The Ministry also stated that the original time schedule of two years for a project of this magnitude was ambitious, too tight and unrealistic. To say the least, the Committee are surprised over this plea taken by the Ministry at this stage. This is clearly indicative of the lack of proper planning and also of the fact that the targets fixed are not such as are capable of achievement. Further, considering the fact that project had been completed after a lapse of seven years as against the target of two years clearly shows laxity in the execution of the project. The Committee take a serious view of such delays in the execution of projects particularly those involving defence preparedness of the country.

59. As regards the cost over-runs, different figures have been furnished to the Committee. According to audit due to time over-run in the completion of Project and reduction in procurement of the number of machines originally envisaged resulted in cost over-run of Rs. 74.13 crores. However, as per the note furnished to the Committee the Ministry of Defence have stated that the anticipated expenditure of the project on completion would be Rs. 424.59 crores as against the original estimate of Rs. 503.75 crores. The Committee consider it relevant to point out in this connection that the reduction in the number of plants and machines from that which was originally envisaged is also a significant factor in determining the cost over-run. As against the original provisions for import of 2008 machines, the actual number of machines import was 1359. The estimated cost of the machines which were not imported has not been intimated to the Committee. Under these circumstances, the Committee are not able to find the precise cost over-run on the project. They therefore, desire to be apprised of the precise expenditure incurred on the project with reference to original estimates after taking into account the impact of the reduction in the number of machines imported.

60. The Committee note that as per the Project Report, production of the armoured vehicles was to commence from 1987-88 onwards. According to the original schedule, 200 vehicles were to be produced by 1989-90, out of which the first 50 vehicles valued at Rs. 63.86 crores only were to be assembled from imported CKDs. The Committee however find that the entire production of 175 vehicles during this period was by assembly with imported CKDs excepting a few components machined/fabricated at the factory resulting avoidable import of CKDs valued at Rs. 270.75 crores. The Committee regret to note that the delay in the completion of the project had led to an avoidable outgo of precious foreign exchange of sizeable magnitude.

61. The Committee note that as against the original rated capacity of 200 vehicles per annum the actual production of the factory has been far less. They find that the actual production achieved during the years 1991-92 and 1992-93 were only 72 and 80 respectively. The Committee have been informed that the production schedule has since undergone changes. According to the Ministry the production schedule had to be revised due to reduced demands from Army on account of budgetary constraints, uncertainties in supply of certain parts from the supplier etc. The Committee note with great concern that the production capacity created at great cost remains largely under-utilised.

62. As regards remedial steps, the Committee were informed by the Ministry that they had gone in for diversification for optimum utilisation of plant and machinery installed by way of rendering assistance to HAL, BEML, Praga, VSSC, ADA, ISRO, Railways etc. However, according to the Ministry diversification to civil sector is further constrained owing to the fact that Ordnance factory set up had been entirely dedicated to defence needs only. The Committee recommend that the Ministry should strive for exploring possibilities of further diversification and exploiting of foreign markets for optimum utilisation of the installed capacity.

63. The Committee find that a Steering Committee and different Working Groups under the former were constituted to identify and resolve critical bottleneck areas in the implementation of the Project. They are, however, constrained to observe that during February, 1983 to March 1991 the Steering Committee had met only 13 times as against 49 meetings envisaged and the working groups on specific areas met between 7 and 18 times only against 28 meetings envisaged for each group during the above period. Considering the inordinate delays in the completion of the project, it is apparent that the Steering Committee failed in resolving the critical bottleneck areas in the implementation of the project. The Committee recommend that the Ministry of Defence should look into the inadequacies in functioning of the Steering Committee/Working Groups for appropriate remedial action.

64. The Committee note that a Project for manufacture of gun 'P' and 'Q' sanctioned on 15 November, 1988 at a cost of Rs. 19.70 crores, was scheduled to be completed by 14 November, 1990, but could be completed only in 1993, after a delay of 3 years. According to the Ministry subsequent change in the scope of the Project and delay in execution of civil works were the contributory factors for belated completion of the Project. The requirements of guns and ammunition for the armoured vehicle 'Z' assembled at the factory during this period had been met either through direct import alongwith vehicle 'Z' or as CKD assemblies thereby rendering additional expenditure. The Committee regret to point out that had there been proper planning to synchronise production of guns and ammunitions to that of the vehicle 'Z' avoidable

additional expenditure incurred in terms of foreign exchange on imports could have been avoided.

65. During the course of examination the Committee came across certain other deficiencies in the execution of the project. The Committee find that with a view to setting up additional facilities at Factory 'A' for the manufacture of Vehicle 'Z' Army land adjacent to Factory 'A' was taken over by Ordnance Factory Board from the Army. An Army pipeline of 2722.5 metres traversing the land so taken over was obstructing the factory facilities and therefore, it was decided to re-route the same. The diversion work was got executed by the Garrison Engineer in November, 1985 at a cost of Rs. 16.79 lakhs and the entire cost was borne by the Project Authorities. According to Audit, there had never been any occasion to use the pipeline ever since its diversion in 1985 and the expenditure of Rs. 16.79 lakhs lacked justification. In the opinion of the Committee this is one more indication of the lack of proper project planning with reference to the ground realities.

66. The Committee further note that subsequent to the diversion of pipeline, pipes worth Rs. 5.00 lakhs were stolen from the area where excavation for rechecking lead contents was done by the contractor. The pipes were reported to be stolen twice once in August, 1988 and then in October, 1988. According to the Ministry, defence properties within the boundary wall or fencing are only regularly guarded and the existing pipelines where the theft occurred was not within fencing or boundary wall. The Committee cannot accept this as a valid argument and desire that suitable steps should be taken by the authorities concerned for safeguarding the government properties.

67. To summarise, the foregoing paragraph reveal inordinate delay in execution of project involving cost and time overrun. There had been several other shortcomings/irregularities in the execution of project for production of the armoured vehicle 'Z' its gun and ammunition. These mainly related to the inadequacies in project planning, under utilisation of capacity, extra expenditure due to avoidable imports, irregularities in the execution of civil works etc. The Public Accounts Committee have time and again commented upon the inordinate delay in the execution of important defence projects. In their 58th Report (Tenth Lok Sabha) the Committee had recommended that the Ministry of Defence should have a fresh look at

the functioning of the mechanism for monitoring the progress in the execution of important defence projects to make it more effective. The Committee desire that the Ministry of Defence while reviewing the mechanism should also make use of the facts brought out in this report as useful inputs in the process.

NEW DELHI;
April 25, 1994

Vaisakha 5, 1916 (Saka)

BHAGWAN SHANKAR RAWAT
Chairman,
Public Accounts Committee.

APPENDIX I

(Vide Para 1)

Audit Paragraph 33 of the C & AG of India for the year ended 31 March, 1991 (No 8 of 1992) Union Government (Defence Services — Army & Ordnance Factories) relating to Production of an armoured vehicle 'Z' its gun and ammunition

Introduction

An armoured vehicle produced at factory 'A' and another imported vehicle 'Y' were due for gradual phasing out from 1980-81 onwards. Army Headquarters (HQ) carried out extensive trials in 1979 on certain imported armoured vehicle 'Z' and recommended their induction into the Indian fleet keeping in view the time-frame of availability of an indigenously developed armoured vehicle 'M'. The Cabinet Committee on Political Affairs (CCPA) while approving the proposal directed the Ministry in June, 1981 to explore the possibility of manufacturing these tanks in India under licence from the foreign supplier. An agreement and a contract were concluded with the foreign supplier in July 1982 for licence and technical know how for indigenous manufacturer of certain number of these vehicle 'Z' on payment of a licence fee of Rs. 45.59 crores.

Organisational set up

The armoured vehicle 'Z' was to be produced in factory 'A' where expertise and manpower were already available for production of vehicle 'X' by augmenting its existing facilities and after transfer of technology by the collaborator. Further, with the phasing out of the latter from 1985-86, facilities created for its production in factory 'A' were to be utilised mainly for production of vehicle 'Z' and some other items viz. production of spares, repowering etc. of vehicle 'X'.

Scope of Audit

The implementation of vehicle 'Z' project was reviewed by Audit and the progress achieved in completion of civil works, procurement of plant and machinery and positioning of man-power, consequences of delay and the targets achieved etc. are discussed in the subsequent paragraphs.

Highlights

- The project scheduled for completion by May, 1989 was expected to be completed by March 1992, thereby exceeding the total cost of project by Rs. 74.13 crores.

- During execution of civil works, a pipeline measuring 2722.5 metres diverted to another site was not put to use since diversion resulting in an expenditure of Rs. 16.79 lakhs as wasteful.
(Para 33.5.2.1)
- An expenditure of Rs. 15.22 lakhs was incurred on account of transportation and handling of certain steel items imported and not use on the project and their consequent transfer to another divisions. Besides imported steel valuing Rs. 47.83 lakhs was also lying unutilised.
(Para 33.5.2.2)
- There were delays in ordering, receipt and commissioning of the plant and machinery.
(Para 33.5.3)
- The production programme for 1989-90 was reduced from 100 to 75 vehicles due to non-receipt of a few critical items from the foreign supplier. The production programme from 1990-91 onwards was also reduced from 150/200 to 125 due to reduction in the demands from the Army owing to budgetary constraints. The capacities, thus, created after incurring heavy expenditure under the project would remain largely unproductive due to reduction in Army's demands, substantial imports of vehicles before sanction of project and their possible phasing out owing to introduction of armoured vehicle 'M' by 1994-95.
(Para 33.6)
- Against Army's indent of September 1986 for 250 vehicles factory 'A' assembled and issued 175 vehicles till March 1990. The first 50 vehicles were to be assembled from imported CKDs but all the 175 vehicles were assembled mostly with imported CKDs excepting a few components machined/fabricated at Factory 'A'. Had the project been completed by May 1989 and indigenous production started, the import of CKDs beyond 50 vehicles from the collaborator and another foreign country valuing Rs. 270.75 crores could have been avoided.

Execution of the project

Cost and time overrun

It was decided to produce vehicle 'Z' at factory 'A' by augmenting its existing capacity and by taking assistance from certain Public Sector Undertakings (PSUs) for communication systems, armour plates etc. and from other Ordnance Factories for opto-electronic and armament items. Based on the CCPA's approval of May 1984, a 'go-ahead' sanction,

pending a regular sanction, for the project was issued by the Ministry in July 1984 at an estimated cost of Rs. 25 crores. The Detailed Project Report (DPR) expected to be made available by December 1984 was, however, prepared only in July 1985 based on the technical project report submitted by the foreign supplier in March 1985. The sanction for manufacture and assembly of certain number of vehicles per annum at factory 'A' at an estimated cost of Rs. 503.75 crores (FE: Rs. 149.15 crores) was issued in April 1987. However, of the 2008 machines required for the project, it was decided not to procure 628 machines costing Rs. 114.48 crores (approximately) thus bringing down the approved project cost to Rs. 389.27 crores. The planned date of completion (PDC) of the project as per sanction was May 1989 and peak production was expected to be achieved during 1991-92. The project was strictly time-bound and trickle production was expected from 1987-88. However, due to delays in ordering, receipt and commissioning of the plant and machinery the project is expected to be completed by March 1992.

The expenditure booked/committed/anticipated upto September 1991 worked out to Rs. 463.40 crores. Thus the time overrun has resulted in a cost over-run of Rs. 74.13 crores.

Civil works

The main production buildings, were completed between February 1987 and August 1988 in phases, at a cost of Rs. 91.74 crores (March 1991) against the sanctioned amount of Rs. 91.50 crores.

The following cases of avoidable expenditure during execution of civil works were noticed:

In May 1985, a Garrison Engineer (GE) concluded a contract for Rs. 2.16 lakhs for diverting an existing water supply mains to another route in a station. The work which involved relaying of 2722.5 metres of pipeline was completed in November 1985 at a cost of Rs. 17.09 lakhs.

During technical examination of the work in October 1986 it was observed that lead consumption for joining the pipes as recorded could not be reconciled with the works diary of the period. The GE was advised to check the lead content of at least three to four joints and forward the actual weights obtained. Consequently, on checking this aspect a recovery of Rs. 0.30 lakh was made from the contractor in November 1988.

In August 1988, the contractor informed the GE that some pipes were stolen from the area where he had carried out excavations for rechecking the lead contents. Pipes were again stated to have been stolen in October 1988 and two persons were apprehended and handed over to the police. The total cost of pipes stolen was Rs. 5.00 lakhs.

The GE intimated (October 1988) that the Army Station Commander had expressed inability to post armed guards and police were not able to protect Government property. According to GE the safety of left over pipe

lines were being ensured by constructing a compound wall around the pipe line and posting of Defence Security Corps (DSC) guards (July 1991). There had never been any occasion to use the pipe lines ever since its diversion in 1985.

Thus, re-routing of pipelines at a cost of Rs. 16.79 lakhs lacked justification and resulted in a further expenditure in the proposed construction of compound wall besides loss of pipes worth Rs. 5 lakhs due to theft.

A review of requirement of steel conducted in November 1987 indicated a total requirement of 44638 tonnes for the project against which 14553 tonnes of steel items costing Rs. 11.30 crores were imported and received between March 1986 and July 1987. Examination of the project records in audit revealed that 4506 tonnes of imported steel had not been used on the project. This was mainly due to 4014 tonnes of imported MS rods and twisted bars costing Rs. 60.05 lakhs which were not used on the project.

Of the above surplus, 2914 tonnes were transferred to out station divisions involving expenditure of Rs. 15.22 lakhs on account of transportation and handling charges. The quantity lying unutilised (March 1990) was 653 tonnes valuing Rs. 47.83 lakhs.

Ministry stated (September 1990) that 463 tonnes would be utilised in the works at Avadi and the remaining quantity would be disposed of by internal transfers. Ministry also stated that MS rods were procured for 3000 married quarters pertaining to this project which were not sanctioned.

Thus, the procurement of imported steel without sanction and not assessing the requirements properly resulted in 653 tonnes of steel valued at Rs. 47.83 lakhs lying un-utilised and avoidable expenditure of Rs. 15.22 lakhs in transferring the material to other divisions.

Plant and machinery

The sanctional project cost included Rs. 412.25 crores (FE: Rs. 149.15 crores) for purchase and installation of plant and machinery. The total number of plant and machinery required for the project (as per DPR) was estimated at 2008 costing Rs. 356.47 crores (FE: Rs. 148.56 crores). Of these, 1380 machines were considered essential for the commencement of production. Upto September 1991 orders for 1317 machines worth Rs. 273.93 crores (FE: Rs. 73.32 crores) had been placed of which 1302 (cost: Rs. 250.33 crores) had been received and 1255 (cost: Rs. 160.70 crores) commissioned.

Delay in ordering, receipt and commissioning of the plant and machinery were attributed to the following:

- delay in concluding contracts, slow start and slow progress in evaluation of order placement.
- delay in clearing cases beyond Ordnance Factory Board (OFB)/ Additional Director General Ordnance Factories (ADGOF)'s powers.

- embargo on dealing with Indian agents for imported plant and machinery.
- difficulties created on account of embargo imposed by foreign Government on export of high technology equipment for Defence industries.
- delay in identification of a public sector undertaking as a source for certain machinery items which were earlier considered for import.
- re-tendering necessitated by failure of joint working arrangement between foreign collaborator and Indian suppliers.
- need for examining sophisticated technology like robotising in certain cases like material handling and welding equipment.
- delayed supplies, erection and commissioning of plant and machinery.

The committed expenditure on plant and machinery upto September 1991 was Rs. 294.44 crores.

Production and capacity utilisation

As the sanction for the project was issued only in April 1987 based on DPR of July 1985, the production schedule had to be modified in March 1988, after taking into account the availability of various input materials for critical items and discussions with the collaborator. The schedule of production as per DPR and as changed in March 1988 and the actual achievement there against was as follows:

Year	Production schedule as per DPR	Changed production schedule	Actual production
1	2	3	4
1986-87	16	—	—
1987-88	34	15	—
			50 from
1988-89	50	85	175
1989-90	100	100	—
1990-91	150	150	111
1991-92	200	200	—

The target for 1989-90 was further reduced (December 1989) from 100 to 75 vehicles due to uncertainty in supply of certain finished parts by the foreign supplier as well as the deficiencies against the supplies of CKDs by the collaborator.

The targets from 1990-91 onwards were also reduced from 150/200 vehicles to 125 as Army indicated (February 1990) a tentative requirement of 125 vehicles only per annum upto 1994-95 owing to budgetary constraints.

The Army initially placed an order in September 1986 for 250 vehicles and an additional order of 200 vehicles in July 1990. Factory 'A' assembled and supplied 175 vehicles during 1987-88 to 1989-90. Though the production of only the first 50 vehicles (value: Rs. 63.86 crores) was to be out of CKDs, the assembly of all the 175 vehicles was done mainly with imported CKDs excepting a few components /assemblies which were machined/fabricated at factory 'A'. The production during 1990-91 was of 111 vehicles only against the reduced target of 125 vehicles. Thus at the end of 1990-91, orders for 164 vehicles remained outstanding.

Had the indigenous production of tanks started by May 1989 as scheduled, the import of CKDs etc. beyond 50 vehicles from the collaborator at a cost of Rs. 268.82 crores and import of special bearings, raw materials, springs and other parts from another supplier at a cost of Rs. 1.93 crores upto June 1990 could have been avoided.

Due to (i) reduction in the requirements of the Army from 200 to 125 vehicles (ii) import of a substantial number of vehicles from the collaborator before sanction of the project and (iii) availability of the indigenously developed vehicle 'M' by 1995, there would not be any need for production of vehicle 'Z' at factory 'A' beyond 1994-95. Thus, the capacities created under the project at a cost of about Rs. 500 crores to meet the gap between the phasing out of vehicle 'X' and induction of vehicle 'M' would be rendered largely unproductive.

Ministry stated (February 1991) that these plans might undergo modification due to changing geo-political conditions. Obviously production of a vital and proven equipment like vehicle 'Z' could not be short closed without very deep and careful consideration. Further, production of spares for this tank had to be sustained during the life cycle of the equipment already in service. Even if vehicle 'M' was developed and accepted by the user, there were many items to be indigenously established and produced. Ministry also stated that the capacities created at factory 'A' were such as to absorb and meet the production demands for future vehicle as well. The plant and machinery procured were also of the latest version which would not become obsolete for a very long time and had inherent capabilities to produce a wide variety of engineering items, facilitating diversification efforts.

Ministry's contention is not tenable in view of the fact that the capacities created under the project had remained or would remain largely unproductive due to reduction in the demand for this vehicle and its possible phasing out from 1995-96 onwards. The extent to which the capacities already created could be gainfully utilised in the manufacture of vehicle 'M' was not known at this stage.

OFB stated (November 1991) that the factory had gone in for diversification of workload for optimum utilisation of plant and machinery installed by way of rendering assistance to HAL, BEML, Praga, VSSC, ISRO, ADA, Railways etc. However, the extent of utilisation as result of diversification was not intimated.

Monitoring

While a Steering Committee was constituted to issue guidelines for implementation of the project, separate Working Groups on Armour, Vehicle, Engine, Armament, Ammunition, Opto-Electronics and Civil Works and Services etc. were constituted to monitor the project execution in specific areas and to oversee and ensure adequate interaction and co-ordination amongst various agencies involved. They were to look into the areas of bottleneck and issues that affected the progress of project and endeavour to resolve them or to project them to the Steering Committee or the Government. These Working Groups were to meet at least once in a quarter.

Although the Ministry stated (February 1991) that but for effective monitoring and co-ordination steps adopted for different stages, the delays would have been much more, the fact remained that between February 1983 and March 1991 the Steering Committee met only 13 times against 49 meetings envisaged. Similarly, during the above period the Working Groups for specific areas met between 7 and 18 times against 28 envisaged for each group.

Arms for the vehicle

The guns 'P' and 'Q' project for the vehicle was sanctioned for implementation at factory 'B' in November 1988 at a cost of Rs. 1970.33 lakhs (plant and machinery: Rs. 1413.33 lakhs and civil works Rs. 557.00 lakhs). The planned date of completion (PDC) of the project as per sanction was November 1990. According to OFB (October 1990) the PDC as per DPR was 48 months from the date of issue of sanction i.e. November 1992 and the Ministry had been requested to issue necessary amendment to the time frame, which was awaited (December 1991).

The project is yet (November 1991) to be completed.

Ammunition

The ammunition project for gun 'P' had not yet (November 1991) been sanctioned as adequate stock of this ammunition ex-import was available for the present.

The ammunition project for gun 'Q' sanctioned in June 1988 at a cost of Rs. 538.47 lakhs at factory 'C' has commenced (November 1991) production as stated by OFB in November 1991. To meet the requirements, pending start of production, CKDs for 6 lakh rounds of the ammunition (variety 'A' : 4.80 lakhs and variety 'B' : 1.20 lakhs) were

imported from the collaborator in 1987 and 1988 at a cost of Rs. 135.46 lakhs. OFB intimated (November 1991) that 4.60 lakhs of ammunition 'A' were not likely to be utilised in the near future in the absence of any demand for this variety of ammunition.

The above review was referred to the Ministry in July 1991; their reply has not been received (December 1991).

APPENDIX II

Conclusions and Recommendations

Sl. No.	Para No.	Ministry/ Department concerned	Conclusion/Recommendation
1	2	3	4
1.	57.	Ministry of Defence (Deptt. of DP & S)	<p>The Committee note that based on extensive trials in 1979, the Army Headquarters recommended the induction of Armoured Vehicle 'Z' into the Indian fleet to be used as interim vehicle pending production of an indigenously developed armoured vehicle 'M'. The Cabinet Committee on Political Affairs (CCPA) while approving the proposal in June, 1981 had directed the Ministry of Defence to explore the possibility of manufacturing these vehicles in the country under licence from the foreign supplier. Accordingly, in July 1982, the Ministry of Defence concluded an agreement with the foreign supplier for licence and technical know-how for indigenous manufacture of certain number of vehicles on payment of a licence fee of Rs. 45.59 crores. It was decided to produce the vehicle 'Z' at Factory 'A' by augmenting its existing capacity and after transfer of technology by the collaborator. The project was sanctioned in April 1987 with an estimated cost of Rs. 503.75 crores including foreign exchange component of Rs. 149.15 crores. The planned date of completion of the project was May 1989 and peak production was expected to be achieved during 1991-92. The project was strictly a time bound one and trickle production was expected from 1987-88. The</p>

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Committee's examination of the Audit Review has ~~revealed~~ several shortcomings in the ~~implementation of~~ the project which are dealt with in the succeeding paragraphs.

2. 58. Ministry of Defence (Deptt. of DP & S) The Committee are distressed to find that the project originally scheduled to be completed by May, 1989 has been completed in March, 1994. The Ministry of Defence (Deptt. of Defence Production & Supplies) attributed the delay *inter-alia* to the delay in ordering, receipt and commissioning of the plant and machinery. The Ministry also stated that the original time schedule of two years for a project of this magnitude was ambitious, too tight and unrealistic. To say the least, the Committee are surprised over this plea taken by the Ministry at this stage. This is clearly indicative of the lack of proper planning and also of the fact that the targets fixed are not such as are capable of achievement. Further, considering the fact that project had been completed after a lapse of seven years as against the target of two years clearly shows laxity in the execution of the project. The Committee take a serious view of such delays in the execution of projects particularly those involving defence preparedness of the country.

3. 59. -do- As regards the cost over-runs, different figures have been furnished to the Committee. According to audit due to time over-run in the completion of Project and reduction in procurement of the number of machines originally envisaged resulted in cost over-run of Rs. 74.13 crores. However, as per the note furnished to the Committee the Ministry of Defence have stated that the anticipated expenditure of the project on completion would be Rs. 424.59 crores as against the original

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estimate of Rs. 503.75 crores. The Committee consider it relevant to point out in this connection that the reduction in the number of plants and machines from that which was originally envisaged is also a significant factor in determining the cost over-run. As against the original provisions for 2008 machines, the actual number of machines import was 1359. The estimated cost of the machines which were not imported has not been intimated to the Committee. Under these circumstances, the Committee are not able to find the precise cost over-run on the project. They therefore, desire to be apprised of the precise expenditure incurred on the project with reference to original estimates after taking into account the impact of the reduction in the number of machines imported.

4. 60. Ministry of Defence (Deptt. of DP & S) The Committee note that as per the Project Report, production of the armoured vehicles was to commence from 1987-88 onwards. According to the original schedule, 200 vehicles were to be produced by 1989-90, out of which the first 50 vehicles valued at Rs. 63.86 crores only were to be assembled from imported CKDs. The Committee however find that the entire production of 175 vehicles during this period was by assembly with imported CKDs excepting a few components machined/fabricated at the factory resulting avoidable import of CKDs valued at Rs.270.75 crores. The Committee regret to note that the delay in the completion of the project had led to an avoidable outgo of precious foreign exchange of sizeable magnitude.
5. 61. -do- The Committee note that as against the original rated capacity of 200 vehicles per annum the actual production of the factory has been far less. They find that the actual production achieved during the years 1991-92 and 1992-93 were only 72 and 80 respectively.

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The Committee have been informed that the production schedule has since undergone changes. According to the Ministry the production schedule had to be revised due to reduced demands from Army on account of budgetary constraints, uncertainties in supply of certain parts from the supplier etc. The Committee note with great concern that the production capacity created at great cost remains largely under-utilised.

6. 62. Ministry
of Defence
(Deptt. of
DP & S)

As regards remedial steps, the Committee were informed by the Ministry that they had gone in for diversification for optimum utilisation of plant and machinery installed by way of rendering assistance to HAL, BEML, Praga, VSSC, ADA, ISRO, Railways etc. However, according to the Ministry diversification to civil sector is further constrained owing to the fact that Ordnance Factory set up had been entirely dedicated to defence needs only. The Committee recommend that the Ministry should strive for exploring possibilities of further diversification and exploiting of foreign markets for optimum utilisation of the installed capacity.

7. 63. -do-

The Committee find that a Steering Committee and different Working Groups under the former were constituted to identify and resolve critical bottleneck areas in the implementation of the Project. They are, however, constrained to observe that during February, 1983 to March, 1991 the Steering Committee had met only 13 times as against 49 meetings envisaged and the working groups on specific areas met between 7 and 18 times only against 28 meetings envisaged for each group during the above period. Considering the inordinate delays in the completion of the project, it is apparent that the Steering Committee failed in resolving the critical bottleneck areas in the implementation of the project. The Committee recommend that the

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Ministry of Defence should look into the inadequacies in the functioning of the Steering Committee/Working Groups for appropriate remedial action.

8. 64. Ministry of Defence (Deptt. of DP & S) The Committee note that a Project for manufacture of gun 'P' and 'Q' sanctioned on 15 November, 1988 at a cost of Rs. 19.70 crores, was scheduled to be completed by 14 November, 1990, but could be completed only in 1993, after a delay of 3 years. According to the Ministry subsequent change in the scope of the project and delay in execution of civil works were the contributory factors for belated completion of the Project. The requirements of guns and ammunition for the armoured vehicle 'Z' assembled at the factory during this period had been met either through direct import alongwith vehicle 'Z' or as CKD assemblies thereby rendering additional expenditure. The Committee regret to point out that had there been proper planning to synchronise production of guns and ammunitions to that of the vehicle 'Z' avoidable additional expenditure incurred in terms of foreign exchange on imports could have been avoided.
9. 65. -do- During the course of examination the Committee came across certain other deficiencies in the execution of the project. The Committee find that with a view to setting up additional facilities at Factory 'A' for the manufacture of Vehicle 'Z' Army land adjacent to Factory 'A' was taken over by Ordnance Factory Board from the Army. An Army pipeline of 2722.5 metres traversing the land so taken over was obstructing the factory facilities and therefore, it was decided to re-route the same. The diversion work was got executed by the Garrison Engineer in November, 1985 at a cost of Rs. 16.79 lakhs and the entire cost was borne by the project Authorities. According to Audit, there had never been any occasion to use the pipeline ever since its diversion in 1985
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and the expenditure of Rs. 16.79 lakhs lacked justification. In the opinion of the Committee this is one more indication of the lack of proper project planning with reference to the ground realities.

10. 66. Ministry of Defence (Deptt. of DP & S) The Committee further note that subsequent to the diversion of pipeline, pipes worth Rs. 5.00 lakhs were stolen from the area where excavation for rechecking lead contents was done by the contractor. The pipes were reported to the stolen twice once in August, 1988 and then in October, 1988. According to the Ministry, defence properties within the boundary wall or fencing are only regularly guarded and the existing pipelines where the theft occurred was not within fencing or boundary wall. The Committee cannot accept this as a valid argument and desire that suitable steps should be taken by the authorities concerned for safeguarding the government properties.
11. 67. -do- To summarise, the foregoing paragraph reveal inordinate delay in execution of project involving cost and time overrun. There had been several other shortcomings/irregularities in the execution of project for production of the armoured vehicle 'Z', its gun and ammunition. These mainly related to the inadequacies in project planning, under utilisation of capacity, extra expenditure due to avoidable imports, irregularities in the execution of civil works etc. The Public Accounts Committee have time and again commented upon the inordinate delay in the execution of important defence projects. In their 58th Report (Tenth Lok Sabha) the Committee had recommended that the Ministry of Defence should have a fresh look at the functioning of the mechanism for monitoring the progress in the execution of important defence projects to make it more effective. The Committee desire that the Ministry of Defence while reviewing the mechanism should also make use of the facts brought out in this report as useful inputs in the process.
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