REPORT OF THE

COMPTROLLER AND AUDITOR GENERAL

OF INDIA

FOR

THE YEAR 1979-80

UNION GOVERNMENT (DEFENCE SERVICES)

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PREFATORY REMARKS

This Report has been prepared for submission to the President under Article 151 of the Constitution. It relates mainly to matters arising from the Appropriation Accounts of the Defence Services for 1979-80 together with other points arising from audit of the financial transactions of the Defence Services.

The cases mentioned in the Report are among those which came to notice in the course of test audit during the year 1979-80 as well as those which had come to notice in earlier years but could not be dealt with in previous Reports ; matters relating to the period subsequent to 1979-80 have also been included, wherever considered necessary.

The points brought out in this Report are not intended to convey or to be understood as conveying any general reflection on the financial administration by the departments/authorities concerned.

CHAPTER 1

BUDGETARY CONTROL

1. Budget and actuals

The table below compares the expenditure incurred by the Defence Services in the year ended March 1980 with the amount of original and supplementary appropriations and grants for the year :

(i) Charged Appropriations

	(Rs. in crores)
Original	*0.49*
Supplementary	*0.83*
Total	*1.32*
Actual Expenditure	*1.23*
Saving	*0.09*
	(*per cent*)
Saving as percentage of the total provision	**6.82**

(ii) Voted Grants

	(Rs. in crores)
Original	3240.30
Supplementary	261.91
Total	3502.21
Actual Expenditure	3549.83
Excess	47.62
	(*per cent*)
Excess as percentage of the total provision	1.36

2. **Supplementary Grants/Appropriations**

(a) Supplementary grants aggregating Rs. 261.91 crores were obtained in January 1980 (Rs. 238.91 crores) and March 1980 (Rs. 23.00 crores) as indicated below :

(Rs. in crores)

Grant	January 1980	March 1980	Total
20—Army	60.61	13.00	73.61
21—Navy	2.22	—	2.22
22—Air Force	160.66	10.00	170.66
23—Pensions	15.42	—	15.42
TOTAL . . .	238.91	23.00	261.91

Grant No. 20—*Army*.—The original grant of Rs. 1895.70 crores was increased—through supplementary grants aggregating Rs. 73.61 crores—to Rs. 1969.31 crores. The actual expenditure, however, amounted to Rs. 2031.37 crores, resulting in an excess of Rs. 62.06 crores (representing 3.15 per cent of the total grant).

Grant No. 21—*Navy*.—The original grant of Rs. 210.37 crores was increased—through a supplementary grant of Rs. 2.22 crores obtained in January 1980—to Rs. 212.59 crores. The actual expenditure, however, amounted to Rs. 206.87 crores, resulting in a saving of Rs. 5.72 crores (representing 2.70 per cent of the total grant). Thus, the whole of the supplementary grant proved unnecessary.

Grant No. 22—*Air Force*.—The original grant of Rs. 661.79 crores was increased—through supplementary grants aggregating Rs. 170.66 crores—to Rs. 832.45 crores. The actual expenditure during the year was, however, Rs. 856.87 crores, resulting in an excess of Rs. 24.42 crores (representing 2.93 per cent of the total grant).

Grant No. 23—*Pensions*.—The original grant of Rs. 176.99 crores was increased—through a supplementary grant of Rs. 15.42 crores obtained in January 1980—to Rs. 192.41 crores. The actual expenditure was, however, Rs. 192.00 crores, resulting in a saving of Rs. 0.41 crore (representing 0.21 per cent of the total grant).

(b) Supplementary appropriations aggregating Rs. 82.80 lakhs (Army : Rs. 12.50 lakhs, Pensions : Rs. 0.30 lakh and Capital Outlay on Defence Services : Rs. 70.00 lakhs) were obtained during January 1980.

In the case of 'Pensions', the total expenditure against the charged appropriation of Rs. 0.80 lakh was Rs. 0.19 lakh, resulting in a saving of Rs. 0.61 lakh. The entire supplementary appropriation of Rs. 0.30 lakh, thus, proved unnecessary.

3. Excess over Voted Grants

The following excess over Voted Grants requires regularisation under Article 115 of the Constitution :

Grant No.	Total Grant	Actual Expenditure	Excess
	Rs.	Rs.	Rs.
20—Army	1969,31,34,000	2031,37,05,351	62,05,71,351
	The excess was mainly on account of larger expenditure on stores for Ordnance Factories and Research and Developmnt Organisation .		
22—Air Force	832,44,70,000	856,86,38,519	24,41,68,519
	The excess was mainly under stores and works.		

4. Savings in Voted Grants

Out of five Voted Grants, there was saving of Rs. 38.86 crores in three grants as shown below :

(Rs. in crores)

Grant No.	Total Grant	Actual Expenditure	Saving		Surrenders	
			Amount	per cent	Amount	per cent
21—Navy	212.59	206.87	5.72	2.70	1.47	0.69
23—Pensions	192.41	192.00	0.41	0.21	—	
24—Capital Outlay on Defence Services	295.45	262.72	32.73	11.08	27.41	9.28

Against the savings of Rs. 5.72 crores under 'Navy' and Rs. 32.37 crores under 'Capital Outlay on Defence Services', surrenders amounting to Rs. 1.47 crores and Rs. 27.41 crores respectively were made on 31st March 1980.

5. **Control over expenditure**

The following are some instances of defective budgeting relating to Voted Grants :

(a) Instances in which supplementary grants remained wholly or partially unutilised :

(Rs. in crores)

Grant No. / Sub-Head	Original Grant	Supplementary Grant	Total Grant	Actual Expenditure	Saving	Amount re-appropriated
20—*Army*						
A.1—Pay and Allowances of Army	653.12	26.41	679.53	661.43	18.10	(—)6.97
21—*Navy*						
A.5—Stores	108.42	0.96	109.38	107.58	1.80	(+)1.00

(b) Instances in which re-appropriations made were wholly or partially unnecessary:

(Rs. in crores)

Grant No. / Sub-Head	Sanctioned Grant	Amount reappropriated	Final Grant	Actual Expendi-diture	Excess(+) Saving(—)
20—*Army*					
A.4—Transportation	45.16	(—)5.63	39.53	44.93	(+)5.40
A.8—Inspection Organisation	33.90	(—)0.97	32.93	34.87	(+)1.94
A.9—Stores	400.36	(—)19.00	381.36	398.17	(+)16.81
22—*Air Force*					
A.1—Pay and Allowances of Air Force	115.38	(—)0.48	114.90	116.09	(+)1.19

(c) Instances in which there was an appreciable shortfall in expenditure compared to the sanctioned/final grant :

(Rs. in crores)

Grant No. / Sub-Head	Sanctioned Grant	Amount re-appropriated/ surrendered	Final Grant	Actual Expenditure	Saving compared to	
					Sanctioned Grant	Final Grant
20—*Army*						
A.2—Pay and Allowances and Miscellaneous Expenses of Auxiliary Forces	7.53	(—)1.29	6.24	5.69	1.84	0.55
24—*Capital Outlay on Defence Services*						
A.2—*Navy*						
A.2(3)—Naval Fleet	78.96	(—)13.96	65.00	63.55	15.41	1.45
A.2(4)—Naval Dockyards	20.12	(—)4.76	15.36	14.20	5.92	1.16
A.4—*Ordnance Factories*						
A.4(2)—Machinery and Equipment	36.43	(+)0.21	36.64	34.05	2.38	2.59

CHAPTER 2

MINISTRY OF DEFENCE

6. Development of a helicopter

In September 1970, Government concluded a 10-year collaboration agreement with a foreign firm 'A' for the design, development and production of a helicopter to meet the requirements of the eighties and assigned it to a public sector undertaking (hereafter referred to as undertaking) for implementation. The agreement envisaged a payment to firm 'A' of US $ 750,000 (Rs. 54.59 lakhs) in 10 annual instalments.

Design and development of the helicopter.—Based on a feasibility study conducted by firm 'A' and the undertaking, the Air Staff Requirements (ASR) were issued by the Air Headquarters in May 1971.

In April 1972, the undertaking sought Government approval to a project report and cost estimates for setting up of the required development facilities. The ASR of May 1971 was modified in July 1974 on the basis of the report of an Inter-Services Team (March 1974). Mention was made in paragraph 8 of the Audit Report (Defence Services) for 1974-75 about the delay in sanctioning the project and non-utilisation of the 10-year collaboration agreement with firm 'A'. The project was finally sanctioned by Government in February 1976 at a cost increased from Rs. 23.04 crores (1972) to Rs. 27.36 crores for development and from Rs. 8.80 crores to Rs. 13.69 crores for establishing the design facilities. The Ministry of Defence had attributed (January 1976) the delay in sanctioning the project to budgetary constraints. Due to delay in the sanction of the project, the first prototype was expected (1975) to be flown by 1981-82 and production was to commence in 1984-85, *i.e.* 4 years beyond the period of the collaboration agreement, expiring in September 1980.

Changes in the concept of the project.—In April 1977, the Air Headquarters proposed the substitution of a single-engine (as per ASR) by a twin-engine configuration. The proposal, reiterated in August 1977, was stated to be based on the experience gained in 1971 operations and by other countries in 1973. A revised ASR (draft) was issued by the Air Headquarters in February 1978 providing for a twin-engine configuration. The undertaking, to which the development of the helicopter was entrusted, however, stated (April 1978) that this would cause a set-back of 15—18 months in the development schedule and that the first flight testing of the prototype and production would be possible by 1984 and 1987 respectively. It added further that continued assistance of the foreign firm 'A' would be required for this purpose.

A technical group constituted in May 1978 recommended two alternative engines manufactured by foreign firms 'C' and 'D'. It was also then assessed that the change to twin-engine configuration would result in a redundancy of stores etc. of Rs. 54 lakhs, further increase in the cost of development by Rs. 6 crores and a delay of 15—18 months in the final induction of the helicopter. A proposal for a change in the scope of the project at a revised cost of Rs. 35.97—Rs. 37.50 crores (increase of Rs. 8.61 to Rs. 10.14 crores) was submitted to Government in October 1978. The proposal also envisaged negotiations with the foreign firm 'A' for extension of the 10-year collaboration agreement (which had meanwhile expired in September 1980) or with other firms. The proposal was approved by Government in January 1979.

The collaboration agreement with firm 'A' (September 1970) provided for its further extension (for a maximum period of 2 years) on payment of US $ 20,000 per year. Though approval of Government was obtained (January 1979) to negotiate with firm 'A' for the extension of the existing agreement and/or to negotiate with other firms for the development of the helicopter, neither has the collaboration agreement been extended, nor has the engine been selected so far (October 1980). The Ministry of Defence stated (June 1980) that the undertaking was holding discussions with some firms in this regard.

The undertaking had meanwhile incurred a capital expenditure of Rs. 3.84 crores on buildings, machinery and equipment and a development expenditure of Rs. 4.49 crores (June 1980) against which Government had reimbursed Rs. 4.01 crores up to June 1980.

The Ministry of Defence stated (November 1980) that :

— at the time of collaboration agreement in 1970, the concept of the role of the helicopter was still evolving and changes in the ASR had to be made to provide for the desirable capability in the context of changing operational environment ;

— considerable expertise in the field of design and development of helicopter had been acquired and this should be utilised in future development work ; and

— the final decision with regard to selection of the engine and entering into collaboration with a foreign manufacturer would be taken shortly and a modern technology helicopter would be successfully designed and developed in about 7 years time.

As mentioned above, negotiations for selection of the engine and entering into fresh collaboration agreement for development of the helicopter were in progress with foreign firms and indications were that the collaboration agreement would entail considerable additional expenditure.

While the project envisaged for developing a helicopter for the eighties was yet to get off the ground even 10 years after the collaboration agreement was signed, the cost estimates have escalated as indicated below :

	1972		1976		1979	
			(Rupees in crores)			
	Total	(FE)	Total	(FE)	Total	(FE)
Design facilities	8.80	(4.10)	13.69	(7.85)	..	
Development	23.04	(6.10)	27.36	(8.73)	35.97 to 37.50	(12.61 to 14.00)
Unit cost of manufacture	0.35		0.45		0.70 to 0.84	(0.35 to 0.42)

7. Replacement of a basic trainer aircraft

Aircraft 'A', built indigenously around an imported engine, was inducted in service in the Air Force in April 1953 as a basic trainer for imparting *ab initio* training to pilots. In November 1965, the Air Headquarters (Air HQ) proposed the replacement of aircraft 'A' by 1970 by a more modern one and suggested that a feasibility study be carried out by a public sector undertaking (hereafter 'undertaking'). The Air HQ issued (May 1968) the Operational Requirement for the aircraft to be developed to replace aircraft 'A'. The feasibility report submitted by the undertaking in February 1969 envisaged development of an improved version of the existing aircraft 'A' with a more powerful engine. The cost of each aircraft to be developed was then estimated at Rs. 2.30 lakhs and development was expected to take 4 years. The undertaking made certain changes in its feasibility report in May 1969.

Meanwhile, the Aeronautics Committee, while observing that the prospects of designing a single piston engine basic trainer aircraft to meet civil and Air Force requirements were not bright, recommended (April 1969) that the matter deserved a careful study before the undertaking could be allowed to go ahead to develop a new aircraft to replace aircraft 'A'. Thus, the undertaking's proposal was temporarily set aside and the matter of having a common basic trainer aircraft was taken up by the Ministry of Defence with the Ministry of Civil Aviation. The Director General, Civil Aviation (DGCA) who had already designed an aircraft 'B' for civil use requested the Air HQ to give their specifications for the *ab initio* trainer. After updating their Air Staff Requirement (ASR) of 1968 to accommodate contemporary changes in the pattern of pilots' training, the Air HQ projected to the DGCA their revised ASR in May 1971. No joint feasibility study by the Air HQ, the DGCA and the undertaking was, however, taken up at this time.

In October 1971, the undertaking intimated the Air HQ that with a view to avoiding duplication in design effort, it would undertake a feasibility study only if the results of evaluation on aircraft 'B' were not acceptable to the Air Force. In November 1971, a feasibility study of modifying aircraft 'B' (under development) to meet the Air Force requirements was entrusted to the DGCA. The DGCA informed (December 1971) the Air HQ that after providing for certain characteristics desired by the Air HQ, aircraft 'B' had been designed to meet more demanding requirements.

During February—September 1972, an Air Force aircraft systems testing establishment evaluated aircraft 'B' and found that the aircraft fell short of the ASR and required some major modifications to improve its performance. The DGCA intimated (December 1972) that incorporation of all modifications and improvements could be carried out in about 2 years. However, later in November 1973, the DGCA suggested that the Air Force should consider inducting aircraft 'B' in its existing form as it met most of the Air Force requirements except cockpit lay-out and its cruise and climb performance. In December 1973, the DGCA indicated that they had no plans to incorporate the major modifications desired by the Air Force.

In the evaluation carried out (July 1974) by the Air Force in association with the DGCA representatives etc., it was found that the performance of aircraft 'B' in its current stage of development fell short of the ASR of 1971 in several respects. The DGCA, however, felt that aircraft 'B' had the basic flying and performance qualities for *ab initio* training both for service and civil requirements and its subsequent prototype to be developed could be fitted with any suitable instrumentation and cockpit layout for the requirement of the Air Force once a decision was taken that basically aircraft 'B' was acceptable for Air Force use.

Thereafter, no coordinated effort was made for further development of aircraft 'B' to achieve the objective desired by the Aeronautics Committee. Finally in October 1974, the Air HQ recommended dropping of the proposal for adoption of aircraft 'B' for the use of the Air Force as it did not appear likely that the DGCA would be able to improve significantly aircraft 'B' which was not suitable for Air Force use.

The DGCA stated (May 1980) that had aircraft 'B' been accepted in principle as a suitable trainer, the country then would have had an indigenous trainer aircraft to meet the civil and service requirements with the essential modifications needed for a trainer and that this would have saved a lot of unnecessary expenditure in obtaining a trainer from abroad. The DGCA added (January 1981) that aircraft 'B' had been developed for civil use at a material cost of Rs. 0.55 lakh (labour cost being not separately available) and one prototype produced was given airworthiness certificate, but that regular production of it had not yet been taken up. Thus, even after nine years, the objective of replacement of aircraft 'A' had not been achieved.

2. *Design and development of a suitable basic piston trainer aircraft by the undertaking*

Meanwhile, in March 1973, the undertaking had informed the Ministry of Defence that supply of spares fabricated by it for aircraft 'A' would continue only up to 1976-77 after which retooling would be necessary and progressive import of different items, raw materials and rotables would become problematic. In September 1974, the undertaking was asked to examine the feasibility of designing, developing and manufacture of a basic piston trainer aircraft (aircraft 'C') as per ASR of 1971 to be inducted in service from 1977-78 so that pilot training might not be disrupted in late 1970s. According to the feasibility study carried out (April 1975) by the undertaking, the design and development cost was estimated at Rs. 168 lakhs (foreign exchange : Rs. 12 lakhs); cost per aircraft was estimated at Rs. 6.40 lakhs (exclusive of profit) at 1974-75 price level. After updating the ASR of 1971 by incorporating further improvements, the Air HQ issued (February 1976) a revised ASR to the undertaking. Sanction to the development of aircraft 'C' by the undertaking at an estimated cost of Rs. 168 lakhs was accorded by the Ministry of Defence in February 1976. The first aircraft was planned to be produced and delivered in the fifth year after the 'go-ahead' sanction of February 1976. The undertaking stated (March 1978) that deliveries would commence in 1981 provided a production order was immediately placed. By May 1979, two prototypes had been flown. The third prototype, being built involving complete redesigning, was scheduled to be flown in December 1980. Besides, one more airframe was also being built to the third prototype standard for carrying out strength/stiffness tests once again in view of change in design.

While reviewing the progress on the development of aircraft 'C', the Air HQ had indicated (May 1978) that if the development was not accelerated, the only alternative would be to replace aircraft 'A' (being maintained at high costs and accident risks with attendant problems on maintenance) through import. In view of the planned phasing out of aircraft 'A' from 1982, the Air HQ had further stressed (March 1979) upon the Ministry of Defence the need for induction of aircraft 'C' by 1981-82 so that pilots' training might not be disrupted. The Air HQ added that in the absence of guaranteed performance of this aircraft, production orders on the undertaking could not be placed. The development work was still (October 1980) in progress. The production order on the undertaking had not yet (October 1980) been placed by the Air HQ.

3. *Cost estimates.*—The project for development of aircraft 'C' originally (April 1975) estimated to cost Rs. 168 lakhs was expected to cost Rs. 377 lakhs on completion (including an expenditure of Rs. 16.86 lakhs on preliminary design studies and certain additional features incurred by the undertaking from its own funds). This did not include the element of profit payable to the undertaking. Against an expenditure exceeding Rs. 298 lakhs incurred by the undertaking on the project up to end of 1979, reimbursements including provisional payments, aggregating Rs. 283 lakhs were authorised by Government to the undertaking up to January 1980.

The increase in development cost was attributed (November 1979) by the Ministry to the increase in wages, overheads, inadequacy of the provision for escalation and increased development work on first two prototypes to improve the performance and handling. In March 1978, the undertaking indicated the revised cost of production of aircraft 'C' as around Rs. 8.5—9.00 lakhs (at 1977 price level).

The search for a suitable basic trainer aircraft to replace trainer aircraft 'A', which commenced in 1965, was yet to materialise (October 1980) even after a passage of 15 years. In the meantime, the requirement had been met with the existing aircraft which was maintained at a very high cost and which also involved high accident rate. The Ministry of Defence stated (November 1979) that the time taken in search of a suitable basic trainer aircraft to replace aircraft 'A' was attributable to the following factors :

— the undertaking's proposal (1969) to design and develop a basic trainer aircraft for the Air Force was temporarily set aside till 1974 in view of the recommendation of the Aeronautics Committee (1969) to explore the possibility of having a single trainer aircraft to serve the needs of both the Air Force and the Civil Aviation ;

— final rejection of aircraft 'B' by the Air Force was due to failure of the DGCA to modify aircraft 'B' to meet the Air Force requirements despite the earlier assurance that the aircraft would be duly improved ; and

— the design and development of aircraft 'C' was entrusted to the undertaking after updating the ASR in February 1976 in view of the enhanced performance required for 1980s.

Delays at various stages in the development of aircraft 'C', the production of which was yet (October 1980) to commence, have led to the following :

— estimated cost of the development of aircraft 'C' increased by Rs. 209 lakhs from Rs. 168 lakhs (1975) to Rs. 377 lakhs (1979) and increase in estimated production cost per aircraft from Rs. 2.30 lakhs (1968) to Rs. 9.00 lakhs (1977) ;

— necessity of maintaining an ageing aircraft 'A' at high costs and risks due to high accident rate ; and

— consequential effect on pilots' training on account of dwindling assets of aircraft 'A' and also delay in availability of a suitable substitute aircraft.

Production order for aircraft 'C' was yet (October 1980) to be placed on the undertaking ; this would result in slippages in its planned deliveries and possibility of import of a trainer aircraft could not be ruled out. Although the search for a basic trainer aircraft in replacement of existing aircraft 'A' started as early as 1965, the Air Force was still (October 1980) without a suitable aircraft.

8. Development and manufacture of a weapon system

In April 1962, the Ministry of Defence sanctioned Rs. 6 lakhs for design and development of a weapon system by the Defence Research and Development Laboratory (DRDL) ; the amount was increased from time to time finally rising to Rs. 34 lakhs (August 1968). As the development of the weapon system was likely to take considerable time, a certain number of weapons 'A' and 'B' were imported from firm 'X' of country 'Z' during March 1968—March 1969 at a cost of Rs. 392.37 lakhs. Equipment (cost : Rs. 23.47 lakhs) to mount weapon 'A' on vehicle 'C' was also imported from the same firm. Subsequently, mounts of a different design offered by firm 'Y' of the same country were found more suitable and were, therefore, imported (October 1972) at a cost of Rs. 17.13 lakhs.

In a note of 1969 the Department of Defence Production stated that the weapon under development was not suitable for introduction in the Army as it would not meet its operational requirements. Nevertheless, it was decided (January 1969) by the Ministry of Defence to continue the project until completion of the development in order to enable the DRDL to derive "maximum benefit out of the project in areas of design development, engineering, trial techniques and evaluation methods of similar weapons". The project was, however, formally closed in April 1972 (technical activities having been closed in August 1970) after incurring an expenditure of Rs. 28.72 lakhs.

After the Army Headquarters (HQ) had theoretically assessed the operational suitability for deployment of weapon 'A', Government approved (February 1970) the proposal to equip certain units with weapon 'A' mounted on equipment 'D' during the plan period of 1969—74 and to enter into a licence agreement with firm 'X' for its manufacture (with option for manufacture of its successor weapon) by a public sector undertaking to be set up for this purpose. A licence agreement for the manufacture of weapon 'A' and its associated ground equipment was accordingly concluded (March 1970) with firm 'X' on payment of licence fee of Rs. 94.52 lakhs in four instalments between 1971 and 1975. The agreement was effective for a period of 10 years. At the same time another agreement (valid for a period of 5 years) was concluded with the same firm for option to manufacture two of the successor weapons. The validity of the option was extended later to 10 years up to March 1980. A sum of Rs. 6.75 lakhs was paid as deposit to be set off against the licence fee payable or to be refunded in full as would be mutually agreed upon. The licence agreement in respect of weapon 'A' was assigned in March 1971 in favour of the public sector undertaking (hereafter undertaking) set up in July 1970. An indent for certain quantities of weapon 'A' (estimated cost : Rs. 11.73 crores) and its associated ground equipment (estimated cost : Rs. 2.60 crores) was placed (March 1971) by the Army HQ on the undertaking. Weapon 'A' and the ground equipment were required to be delivered in a phased manner during 1971—74 and April 1972—September 1973 respectively. The undertaking actually manufactured and supplied 100 per cent of the quantities of weapon 'A' indented and 71.5 per cent of the ground equipment.

To enhance the fighting potential of the formations, it was decided to deploy weapon 'A' with equipment 'D' and the Vehicle Research and Development Establishment (VRDE) was asked in December 1969 to develop a suitable mount for equipment 'D'. A prototype of the mount developed (at a cost of Rs. 0.37 lakh) by the VRDE was subjected (January 1971) to user trials, which revealed that the deployment of weapon 'A' with equipment 'D' did not permit full exploitation of the weapon as the characteristics of weapon 'A' and equipment 'D' were not compatible with each other. Keeping in view the operational requirements and effectiveness of weapon 'A', it was decided (February 1971) that weapon 'A' should be mounted on equipment 'E' for some squadrons and on equipment 'F' for others. The VRDE was, therefore, asked (February 1971), to develop a suitable mount for equipment 'E' and on its successful completion to develop a mount for equipment 'F' ; it was visualised then that this development task would be completed during 1969—74. The first mount developed by the VRDE for equipment 'E' was subjected to user-cum-technical trials in February 1972 and certain modifications were found necessary to bring it to acceptable standards of operational efficiency. The proposed modifications were carried out, but the trials carried out (March 1974) on the prototype after modifications revealed inherent weakness in its design and lay-out and the mount was found unsuitable. An expenditure of Rs. 1.60 lakhs had been incurred on the development of this mount. Further development of the mount was not considered cost-effective in view of the phasing out of the equipment 'E' by 1976-77 and the extended time that would be required for the development of the mount and its production. Also no development work had commenced on the mount for equipment 'F', which, if then undertaken, would have taken considerable time. It was, therefore, decided (March 1974) not to mount weapon 'A' on equipment 'E' or 'F'.

Around the same time, an Army workshop developed a mount for weapon 'A' on vehicle 'G' based on the mount imported (October 1972) from firm 'Y'. This mount was found suitable during trials carried out in August 1974. The Army HQ, therefore, obtained the approval of Government (April 1975) for the deployment of weapon 'A' on vehicle 'G' instead of equipment 'D' or 'E' as envisaged earlier and also for incurring an expenditure of Rs. 57 lakhs on procurement of installation kits for vehicle 'G'. The Ministry of Defence stated (February 1980) that a more detailed and exhaustive examination of the deployment of weapon 'A' with equipment 'D' and 'E' was carried out only after the trials were carried out on the mounts when it was found that ~~of~~ the technical and logistic requirements would be met by mounting this weapon on vehicle 'G'.

When the development of the mount was in progress, the undertaking had planned the manufacture of ground equipment around equipment 'E' for the quantities indented and had issued (September 1971) letters of intent to firm 'X' for supply of 11.4 per cent, 11.4 per cent and 5.7 per cent of the total quantity ordered in the form of completely assembled sets, sub-assemblies and components respectively. Letters of intent were also issued by the undertaking in March and May 1972 for supply of components for the balance quantity (71.5 per cent) except certain costly items which were proposed to be indigenised. In November 1972, the undertaking, however, placed an order for these items (cost : Rs. 17.69 lakhs) also as it was felt that during the time-frame available it would not be possible to indigenise the same. The order for ground equipment placed on the undertaking was reduced in January 1975 by 28.5 per cent of the total quantity. The undertaking, which was requested to confirm acceptance of the reduction in the order without financial repercussion, replied (March 1975) that since most of the items required for manufacture of ground equipment had already been procured (by December 1974), short-closure of the order at that stage would result in an infructuous expenditure of approximately Rs. 36 lakhs, though the exact figure would be known only after obtaining various details. After taking into account the requirement of spares for the expected life of the equipment, assessed by the Army HQ, the undertaking stated (June 1977) that material of the value of Rs. 17.20 lakhs would still be redundant.

The following are the main points that emerge :

— In terms of an agreement concluded with firm 'X' in March 1970, an option was to be exercised within a period of 10 years for manufacture of two successor weapons to weapon 'A' (for which a deposit of Rs. 6.75 lakhs had been made), but no decision in this regard had been taken (October 1980) and validity of the option had expired in March 1980.

— Although weapon 'A' was considered (January 1970) suitable for deployment with equipment 'D', in January 1971 the characteristics of weapon 'A' and equipment 'D' were found to be incompatible with each other.

— Efforts for deployment of weapon 'A' with equipment 'E' also failed after spending Rs. 1.60 lakhs on development of mount for it.

— Due to failure of efforts for deployment of weapon 'A' with equipment 'D' as well as 'E' and consequent on the decision taken to use the weapon with vehicle 'G', the order placed on the undertaking for associated ground equipment was curtailed by 28.5 per cent thereby resulting in redundancy of material to the extent of Rs. 17.20 lakhs. Had the order on the undertaking been placed after successful development of a suitable mount for weapon 'A', the redundancy could have been avoided.

CHAPTER 3

ORDNANCE AND CLOTHING FACTORIES

9. Purchase of defective forgings for shell of an ammunition

Against an indent of factory 'A' placed (July 1972) for two types of aluminium alloy forgings (types 'X' and 'Y') needed in the manufacture of two components of the shell of an ammunition, the Department of Defence Supplies (DDS) placed an order on an indigenous firm 'M' in December 1972 for 10,000 numbers each of the two forgings to be supplied at the rate of 1,000 numbers per month after 8 weeks from the date of acceptance of advance samples. The rates accepted were Rs. 34 and Rs. 36 each for forgings 'X' and 'Y' respectively which were increased to Rs. 45 and Rs. 48 respectively in September 1975 due to rise in power tariff and excise duty.

Advance samples of the forgings submitted by firm 'M' were approved (September 1974) by the inspecting officer (Inspector of Armament). As per drawings and specification, the forgings were to be made either by cast slags or by extruded rods. However, supplies of only 491 numbers of forging 'X' and 77 numbers of forging 'Y' (both of cast slags) were received (March 1975) by factory 'A' and firm 'M' was paid (March 1975) Rs. 0.20 lakh. In July 1976, factory 'A' informed firm 'M', the Director General, Ordnance Factories (DGOF) and the inspecting officer that 5 samples each of forgings 'X' and 'Y' from the supplies received (March 1975) were taken up at random for machining, but various defects, viz. tearing of material, blow holes, cracks and bad material, etc. were noticed in them after machining. The defects noticed were, however, not intimated to the DDS and no investigation was made as to why these defects could not be identified when the advance samples were approved in September 1974, and whether the material specification was in order. Since firm 'M' failed to make further supplies of the forgings within the stipulated delivery period as extended till 30th June 1976, the order on it was cancelled by the DDS in October 1976 at the firm's risk and cost. The forgings (cost: Rs. 0.20 lakh) received from firm 'M' were not utilised in production and remained on stock of factory 'A' (October 1980).

Meanwhile, in March 1976, factory 'A' placed another indent on the DDS for 30,300 numbers of forging 'X' and 55,400 numbers of forging 'Y'. Against the indent, the DDS received offers from 5 firms as follows :

	Unit cost	
	Forging 'X'	Forging 'Y'
	Rs.	Rs.
Firm 'N'	23.50	28.00
Other firms	varying from 49.30 to 155.00	varying from 59.15 to 178.00

Although the prices offered by firm 'N' were far lower than those of other firms as also of firm 'M' accepted earlier in December 1972, no doubts were raised by the DDS or the DGOF or factory 'A' regarding the suitability of its products and an order for supply of 10,000 numbers of forging 'X' and 15,000 numbers of forging 'Y' was placed on firm 'N' in October 1976. In January 1977, firm 'N' submitted advance samples of forgings 'X' and 'Y' (produced out of cast slags) to the inspecting officer for approval before commencing bulk production; these were accepted during March and April 1977.

Although the samples drawn from the forgings (produced out of cast slags) earlier supplied by firm 'M' against the order of December 1972 were found (July 1976) to be defective after machining operations, the quantities ordered (October 1976) on firm 'N' were increased in July 1977 to 20,000 numbers and 30,000 numbers for forgings 'X' and 'Y' respectively without subjecting the advance samples to machine operations. The full quantities of the forgings (made out of cast slags), duly inspected by the inspecting officer, were received by factory 'A' from firm 'N' during July 1977 to March 1978. The forgings on receipt were not subjected to material testing since these were tested and accepted by the inspecting officer before despatch. Out of the supplies received from firm 'N', factory 'A' had machined (till March 1978) 10,104 numbers of forging 'X' and 6,254 numbers of forging 'Y'. When the shells assembled with the components produced out of these machined forgings underwent proof test, it was found (March 1978) that there was separation/breaking of one of the components. The production of the components with the forgings supplied by firm 'N' was, therefore, suspended in April 1978 and after making an enquiry, the DGOF apprised (April 1978) the DDS that the forgings were totally unacceptable being unsafe for use in the ammunition. The DDS stated (October 1980) that by April 1978, all supplies had been received from firm 'N' and 95 per cent payment made. In January 1979, after conducting further trials of the components produced, the DGOF stated that the supplies of forging 'X' should be totally rejected and those of forging 'Y', though sub-standard, be accepted as a short-term measure by taking calculated risk subject to the approval of the Director of Inspection, Armament/Chief Inspector of Armament. In April 1979, the DDS set up a committee to inquire into the circumstances leading to the rejections of the forgings. The Ministry of Defence stated (October 1980) that :

— the enquiry report had been submitted and was being processed ;

— the forgings, as they were, could not be accepted in view of the risks involved ;

— according to legal advice, firm 'N' was under obligation to repair and replace the defective forgings; and

— a notice was being served on the firm accordingly.

Firm 'N' was paid (during September 1977 to July 1978) Rs. 18.73 lakhs (including taxes) as 95 per cent cost of the supplies made. In addition, factory 'A' had incurred an expenditure of about Rs. 16.02 lakhs in the machining of 10,104 numbers of forging 'X' and 6,254 numbers of forging 'Y', their assembly and proof tests.

10. Delay in establishment of manufacture of a sub-assembly of an ammunition

For manufacture of one of the sub-assemblies of a fuse for an ammunition in factoroy 'D', the Director General, Ordnance Factories (DGOF) placed (March 1966) indents for procurement of automatic lathe machine (5 numbers) on the Director General, Supplies and Disposals (DGSD). In response to tender enquiry (April 1966) issued by the DGSD, the offer of firm 'A' was considered (June 1966) suitable by the DGOF. On the recommendation of the DGOF, contract was concluded (December 1966) by the DGSD with firm 'A' for supply of 5 machines at a total cost of Rs. 2.59 lakhs within 6 to 8 months ex-works abroad of its principals after receipt of order and import licence. The import licence was issued to firm 'A' only in August 1967 and the delivery period was refixed (September 1967) as July 1968. But firm 'A' failed to supply the machines within the extended period. Although the DGOF apprised (July 1969) the DGSD that delay in delivery of the machines would affect production, neither was the contract cancelled by the DGSD nor were the machines procured from other sources invoking risk purchase clause of the contract. On the other hand, firm 'A' was allowed (September 1969) extension till December 1969. Though firm 'A' failed to supply the machines even by December 1969, details of offers made (January 1970 and January 1972) by firm 'A' for supply of machines of revised design continued under correspondence between firm 'A' and the DGSD and between the DGSD and the DGOF for over 3 years. On 10th April 1973, firm 'A' informed that although its principals had discontinued manufacture of the machines, it would supply 5 machines of the revised design (cost: Rs. 2.50 lakhs) against the contract provided the import licence was revalidated by 30th April 1973; no decision was taken by the DGSD on this. In October 1973, firm 'A' informed the DGSD that 5 machines, which had been kept reserved for the DGOF by its principals from March 1973, could not be held for an indefinite period and requested on 10th November 1973 that the amendment letter relating to the description of the machines, price, etc. should reach it alongwith the import licence revalidated till March 1974 by 25th November 1973. While the amendment letter was issued by the DGSD on 30th November 1973, the import licence duly revalidated was issued only in June 1974. The Ministry of Defence stated (November 1980) that the revalidation of the import licence (expired in 1970) was delayed as it required clearance from the Director General, Technical Development.

Since firm 'A' 's conditions indicated in November 1973 were not complied with, firm 'A' declined (September 1974) to supply the machines and requested for cancellation of the contract without financial repercussion. On the advice of the Ministry of Law, the DGSD cancelled (August 1975) the contract without financial repercussion on either side. A fresh contract was concluded (October 1975) with firm 'C' for supply of 5 machines at a total cost of Rs. 12.12 lakhs involving an extra expenditure of Rs. 9.53 lakhs. The machines were received by factory 'D' in April 1976 (within 6 months of the contract) and commissioned in September 1976. The Department of Supply stated (December 1979) that all possible action was taken by the DGSD to get the supplies of the machines from firm 'A' and that firm 'A' having made a commitment initially, imposed unrealistic time limitations for issue of import licence etc. to wriggle out of the contractual obligations. The Ministry of Defence stated (November 1980) that although the DGOF had all along been impressing on the DGSD to cancel the contract on firm 'A' and resort to risk purchase, the DGSD, instead of cancelling the contract, entered into prolonged correspondence with firm 'A' although the firm did not evince any interest.

Meanwhile, the production of the fuse was established in factory 'D' in 1967-68 and the requirement of the sub-assembly was being met by imports and procurement from trade. After the automatic lathe machines were received (April 1976), factory 'D' took up manufacture of the sub-assembly on development basis in August 1976 and a pilot batch of 500 numbers produced during June 1978 was cleared in January 1979. The delay in completion of the development work was attributed to various teething troubles. Till April 1980 the factory had produced only 0.14 lakh of the sub-assembly.

Due to delay in establishment of manufacture of the sub-assembly of the fuse, 43,225 numbers (total cost: Rs. 15.59 lakhs) were imported and 6,82,795 numbers (total cost: Rs. 375.39 lakhs) were procured from indigenous firms till October 1980 commencing from 1968. The purchase of 5,23,795 numbers made since July 1972 alone had involved an extra expenditure of about Rs. 73.00 lakhs computed on the basis of the production cost of Rs. 45 per sub-assembly at factory 'D' during 1978-79.

11. Under-utilisation of production capacity of an ordnance factory

Mention was made in paragraph 4 of the Report of the Comptroller and Auditor General of India for the year 1970-71, Union Government (Defence Services) regarding the unsatisfactory performance of an ordnance factory in the manufacture of certain types of explosives, delay in the commissioning and under-utilisation of various plants. The Public Accounts Committee (PAC) (5th Lok Sabha: 1972-73) in its 92nd Report had, *inter alia,* recommended that :

- the cost of production of process material 'X' required for the manufacture of explosive 'A' should be progressively brought down ;
- there should be no delay in establishing the required variety of explosive 'B' for a particular ammunition after 1974; and

— the process material plant for explosive 'C' should be fully utilised to meet the requirements of the factory as well as civil trade.

2. A review in audit (February 1980) of the performance of the factory in the light of above recommendations of the PAC disclosed the following points :

(i) *Explosive 'A'*:—The annual installed capacity of the second hand plant for the manufacture of explosive 'A', which was originally fixed at 984 tonnes, was refixed at 804 tonnes subsequent to the guarantee run (1969-70) as agreed to by the supplier. The realisable capacity was, however, determined at 660 tonnes only. The Ordnance Factory Board (OFB) stated (October 1980) that the plant having further deteriorated due to continuous working, a production capacity of 480 tonnes per annum was considered practicable even though it was trying to achieve a production of 600 tonnes per annum. During the six years from 1974-75 to 1979-80, the actual production was 158 tonnes (1974-75), 401 tonnes (1975-76), 319 tonnes (1976-77), 600 tonnes (1977-78), 506 tonnes (1978-79) and 515 tonnes (1979-80). The OFB stated (October 1980) that the shortfall was due to restricted supply of sulphuric acid, shortage of storage space, break-down in plant and unforeseen repairs to equipment, non-availability of process material 'X', etc.

The shortfall in production of explosive 'A' was made up through import of 645 tonnes (cost: Rs. 2.48 crores) during August 1977—May 1979 and received during December 1978 to April 1980. A further quantity of 950 tonnes indented by the OFB in January 1980 for import (estimated cost: Rs. 4.087 crores) was ordered in March—April 1980, of which 400 tonnes were received till October 1980.

(ii) The production of explosive 'A' entailed manufacture of process material 'X' from process material 'Y' which in turn was to be manufactured from a basic raw material. For the manufacture of process material 'X', as against the capacity of 32.6 tonnes per month demonstrated by the foreign technicians by using indigenous material, the achievable capacity was indicated on the basis of experimental trials conducted in August-September 1975 as 9.74 tonnes per month (117 tonnes per annum) which would produce 160 tonnes of explosive 'A' per annum. As the cost of production of material 'X' (about Rs. 79,692 per tonne on average during 1974-75 to 1977-78) was much higher than that, at which it was available abroad, (about Rs. 8,356 per tonne on average during the corresponding period) where it was produced by a different process, and as there was scarcity of basic raw material, the Ministry informed the PAC (1972-73) that pending technical studies on the plant to achieve higher yield and efficiency, the plant would be run at a low level consistent with the availability of basic raw material. Details of the quantities of explosive 'A' and the process material 'X' manufactured during 1974-75 to 1979-80 giving break-up of the quantities of explosive 'A' manufactured out of process material 'X' produced in the factory and out of imported material 'X' together with corresponding yearwise costs of production are given on page 28 :

Year	Total quantity of explosive 'A' manu-factured	Quantity of explosive 'A' produced with factory material 'X' (Tonnes)	Quantity of explosive 'A' produced with imported material 'X' (Tonnes)	Unit cost of explosive 'A' when factory material 'X' was used (Rs. per tonne)	Unit cost of explosive 'A' when imported material was used (Rs. per tonne)	Total quantity of material 'X' produced in factory (Tonnes)	Cost of material 'X' produced in factory (Rs. per tonne)	Average cost of imported material 'X' (Rs. per tonne)
1	2	3	4	5	6	7	8	9
1974-75	158	20	138	91,334	39,712	33	79,518	4,069
1975-76	401	50	351	91,980	43,301	22	77,360	11,114
1976-77	319	41	278	96,401	39,619	19	76,657	10,391
1977-78	600	14	586	98,938	44,265	12	85,232	7,851
1978-79	506	Nil	506	Nil	56,453	Nil	Nil	No receipt
1979 80	515	Nil	515	Nil	52,346	Nil	Nil	11,777

A total quantity of 1,938.15 tonnes of process material 'X' (cost : Rs. 179.84 lakhs) was imported by the factory against indents for 2,259 tonnes from 1974-75 to 1979-80. A further quantity of 355 tonnes was also indented by the OFB in June 1980 for import (estimated cost : Rs. 29.43 lakhs) and it was yet to be ordered (October 1980).

(iii) Instead of production from process material 'X', 26.70 tonnes of an intermediate product were obtained (March 1979) by the factory from a public sector undertaking at an estimated cost of Rs. 5.34 lakhs and the entire quantity was converted to explosive 'A'. However, further attempts to obtain the intermediate product from the public sector undertaking were not successful as they were having problems in the plant, thus leaving no alternative to the OFB but to import material 'X'.

(iv) The imported plant costing Rs. 45.91 lakhs and designed to produce 4,584 tonnes of material 'Y' per annum (achievable capacity assessed as 3,780 tonnes per annum) was not fully utilised and the process material actually produced was 561 tonnes in 1974-75, 274 tonnes in 1975-76, 451 tonnes in 1976-77, nil in 1977-78, 43 tonnes in 1978-79 and 66 tonnes in 1979-80. The shortfall was attributed (October 1980) to limited availability of basic raw material.

3. *Explosive 'B'*.—Against the annual installed capacity of 810 tonnes in terms of a single variety of propellant, the realisable capacity computed for a product mix of 4 different types of propellants for which the plant was designed was assessed as 720 tonnes only including 60 tonnes earmarked for Research and Development (R&D) establishment. The actual production against production programme expressed in terms of a single component was 264.51 tonnes (1974-75), 337.83 tonnes (1975-76), 442.46 tonnes (1976-77), 424.47 tonnes (1977-78), 400.42 tonnes (1978-79) and 335.51 tonnes (1979-80). According to the OFB (October 1980), full requirements of these 4 varieties of propellants were met for production of explosive 'B'.

In paragraph 2.63 of 92nd Report of the PAC (5th Lok Sabha : 1972-73), it was mentioned that the above capacity could be fully utilised provided the factory could produce a different variety of explosive 'B' which would require a small addition of another explosive to be produced in another plant planned to be set up as an integral part of the rocket and propellant project for manufacture of a highly sensitive substance. Even though this plant was commissioned in the factory in January 1975, production of the specified variety of explosive 'B' for the development of which Rs. 4.13 lakhs had already been spent up to 1979-80, could not be established using the technology and equipment available in the factory.

Thus, 1,579 tonnes of the specified variety of explosive had to be ordered for import by another factory ; against this, 1,206.045 tonnes (cost : Rs. 455.50 lakhs) were imported during 1974-75 to 1980-81 (October 1980). A further quantity of 292 tonnes (estimated cost : Rs. 2.02 crores) had been indented by the OFB in May 1980 and it was yet to be ordered (October 1980) for import which was to be continued till a suitable production potential for the manufacture of this variety of explosive was built up in the country.

4. *Process material 'H'*.—(i) The realisable capacity of process material 'H' had been assessed at 1,284 tonnes as against the annual installed capacity of 1,308 tonnes. The actual production was 352 tonnes (1974-75), 192 tonnes (1975-76), 156 tonnes (1976-77), 325 tonnes (1977-78), 257 tonnes (1978-79) and 249 tonnes (1979-80). The OFB stated (October 1980) that the shortfall was due to restricted production to keep pace with the requirement of finished explosive as per production programme and the demand of supply of the item to the civil trade being low from 1976-77 because of additional production capacity for the item having been set up in the private sector whose prices were also lower.

(ii) Besides, acid plants had also remained under-utilised, the utilisation during 1974-75 to 1979-80 varying from 24.2 to

56.8 per cent for nitric acid plant, 32.2 to 59.9 per cent for nitric acid concentrating plant and 14.6 to 30.7 per cent for sulphuric acid concentrating plant. Despite marketing of acids to civil trade, the low outturn had been attributed to matching of production in the ancillary process plants with the requirement for finished item of explosive.

5.1 A project for the creation of additional capacity for production of 1,200 tonnes per annum of rocket propellants and ballistites was also sanctioned (May 1969) at an estimated cost of Rs. 17.14 crores, which was increased (April 1972) to Rs. 20.034 crores. The project was to be completed within 4 to 5 years from the time of sanction.

The civil works were completed between October 1972 and March 1976. The contract for import of 5 plants and for the supply of technical documentation at a total cost of Rs. 421.74 lakhs was concluded in February 1970 with a foreign firm. Contracts for the supply of the remaining 5 ancillary plants (cost : Rs. 300.73 lakhs) were concluded between April 1971 and June 1971. The plants erected/commissioned were taken over by the factory between January 1975 and December 1976 against the target date of May 1974. The delay in taking over all the plants had been attributed to delay in completing the guarantee run for one plant due to :

- change of specification of one item mutually agreed to in January 1976 ;
- replacement of an item originally included for guarantee run by a new product resulting in considerable trial, development work and subsequent test and analysis both in the foreign country and at the factory ; and
- failure of one of the lots of the above item in ballistic test necessitating the collaborator's representatives conducting certain trials in their country completed in December 1976.

One out of 2 units of ancillary plant procured for producing the highly sensitive substance under the project, exploded in May 1975 during commissioning trials and the whole plant and building including certain material (cost : Rs. 28.60 lakhs) were destroyed. A board of enquiry held immediately could not identify the cause of the accident. A fresh contract was concluded (May 1976) for the plant at a cost of Rs. 15 lakhs and it was commissioned in April 1979 (cost : Rs. 21.05 lakhs). Reconstruction of the building was sanctioned by the DGOF (November 1977) at a cost of Rs. 3.41 lakhs and completed in November 1979.

5.2 Orders were placed for the development of 6 items of rocket propellants and 4 items of ballistites at an estimated cost of Rs. 1.02 crores. Out of these, 2 items of rocket propellants and all items of ballistites were established in 1975-76 and 1976-77. In addition 1 item of rocket propellant was developed in 1976-77. The development expenditure incurred thereon was Rs. 1.04 crores (February 1980). For the development of other items, which were yet to be established, an expenditure of Rs. 20.32 lakhs had been incurred (February 1980). Out of the installed capacity of 720 tonnes for the propellants and 480 tonnes of ballistites, the actual quantities manufactured and the percentage utilisation of capacities during the four years from 1976-77 to 1979-80 were as under :

Year	Propellants		Ballistites	
	Quantity produced (in tonnes)	Percentage of capacity utilised	Quantity produced (in tonnes)	Percentage of capacity utilised
1976-77 . . .	23	3.2	44	9.2
1977-78 . .	18	2.5	185	38.5
1978-79 . . .	30	4.1	126	26.2
1979-80 . . .	28	3.9	128	26.7

The under-utilisation of capacity had been ascribed to paucity of service demands either because some of the items became out-dated or were still under development by the R&D organisation and also delay in bulk production of a rocket in an ordnance factory caused by frequent changes in the design of the item (production was planned in July 1976 for 45,000 numbers per annum). Utilisation of the installed capacity for the production of the propellants and the ballistites was 3.85 per cent and 24.65 per cent on an average respectively up to 1979-80.

The OFB stated (October 1980) that capacity utilisation in the rocket propellant plant was expected to go up substantially not only for meeting the indigenous production of rocket and missiles, but also for replacement of the time-barred propellants and imported rockets and missiles.

Due to under-utilisation of the main plants, ancillary plants for production of process material and also the connected acid plants also remained under-utilised as indicated below :

Sl. No.	Nomenclature of plant	Installed capacity (per annum) (Tonnes)	Quantity produced in tonnes			
			1976-77	1977-78	1978-79	1979-80
1.	'P' .	780	133	190	134	331
2	'Q' .	1,083	77	108	89	71
3	'R' .	888	163	259	247	191
4	Sulphuric acid/ oleum .	10,080	3,790	5,241	5,555	4,241
5	Nitric acid .	6,120	1,175	2,344	2,420	401

6. In order to utilise the spare capacity available in one of the two ancillary plants procured under the project for establishment of production capacity for rocket propellants and ballistites, Government accorded sanction in September 1977 for Rs. 4.23 lakhs for developing 4 varieties of industrial nitro cellulose for civil trade. All these had been developed, but bulk production thereof was yet to commence (October 1980) for lack of orders from trade.

7. *Summing up.*—The following main points emerge :

— none of the recommendations of the PAC (1972-73) have been adequately implemented ;

— imports of explosive 'A', material 'X' and specified variety of explosive 'B' involved outgo of foreign exchange of Rs. 6.56 crores, Rs. 2.09 crores and Rs. 6.57 crores respectively ;

— technology and equipment available in the factory became outmoded and investigations decided upon in 1972-73 in regard to production of material 'X' were yet (October 1980) to be completed ;

— a loss of Rs. 28.60 lakhs occurred as a result of explosion of a plant ;

— due to lack of service demands, the capacity newly created for production of rocket propellants and ballistites at a cost of Rs. 20 crores remained surplus to a considerable extent since inception (January 1977) and was proposed to be utilised for civil trade items.

12. Delay in establishment of manufacture of an ammunition and resultant loss

In paragraph 9 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1977-78, mention was made of the delay in establishing manufacture of an ammunition (types 'X' and 'Y') for weapon 'B' for which technical documentation was obtained (1967) at a cost of Rs. 25.65 lakhs from a foreign Government 'P' under a contract (concluded in October 1966) and development orders were placed on factory 'K' for 10,000 numbers of type 'X' and 5,000 numbers of type 'Y' ammunition in December 1969 and April 1970 respectively.

The programme initially laid down by the Director General, Ordnance Factories (DGOF) for supplying the development orders envisaged manufacture of 1,000 numbers and 9,000 numbers of type 'X' ammunition during 1973-74 and 1974-75 respectively and 5,000 numbers of type 'Y' ammunition during 1974-75; the manufacture of type 'Y' ammunition was to start after completion of manufacture of type 'X' ammunition. Factory 'K' could not, however, keep up to the programme due to the delay in establishment of manufacture of the ammunition since the approved specifications for the propellant were sent by the Research and Development Organisation, after finalising the design of propellant primer combination, only in September 1975 and the cartridge cases and shells against the orders placed (June and September 1970) were not supplied by the sister factories; clearance for bulk manufacture of these components was given by the Inspectorate in March 1977 and October 1978 respectively.

As weapon 'B' was expected (April 1972) to go out of service after 1979-80 and no supplies of ammunition were made, the Army suggested (April 1978) that the manufacture of the ammunition should be completed by 1979-80 or the orders cancelled without financial liability to them. However, since considerable expenditure (Rs. 81.67 lakhs) had already been incurred on tooling etc., it was decided (April 1978) not to cancel the entire order, but to restrict the manufacture to 5,000 numbers of type 'X' ammunition only for supply by 1979-80 without financial repercussion. Accordingly, a programme for supply of 2,000 numbers (during 1978-79) and 3,000 numbers of type 'X' ammunition (during 1979-80) was fixed by the DGOF in May 1978. However, no supplies were made during 1978-79, as lower priority was given by the DGOF to its manufacture in order to utilise available capacity for manufacture of other important items of production and it was intimated (January 1979) to the Ministry that completion of 5,000 numbers for wiping out the expenditure already incurred would entail further expenditure when Army had in fact no need of this ammunition. The order for ammunition type 'X' was, therefore, cancelled by the Army in February 1980 and that for the other type was awaiting formal cancellation (July

1980). The Ministry of Defence stated (December 1980) that this ammunition being substantially different from others under production in the ordnance factories, required considerable time for development and productionisation and that the delay in establishment of its production would not have mattered much, had it not been superseded by better variety of ammunition on strategic and other considerations by the Army.

Thus, the manufacture of types 'X' and 'Y' ammunition was not established even 13 years after the technical documentation was received (1967) from the foreign Government and it was abandoned in 1980 as the Army no longer required them. The total financial implication due to abandonment of manufacture of the ammunitions was Rs. 107.32 lakhs (inclusive of cost of documentations : Rs. 25.65 lakhs). Of this, a sum of Rs. 14 lakhs represented cost of paper laminated containers procured (1973) from trade for the entire quantity of types 'X' and 'Y' ammunition ordered even before their manufacture was established.

13. Unnecessary import of a material at high cost

In May 1975, factory 'A' placed an indent on Hindustan Steel Ltd. (HSL) for supply of 5,824 tonnes (reduced to 3,824 tonnes in December 1976) of cold rolled steel sheets (size 'P') for manufacture of jerricans. The Director General, Ordnance Factories (DGOF), however, advised (July 1976) factory 'A' that due to plant breakdown, the HSL would not be able to supply 500 tonnes of steel sheets, scheduled by the end of July 1976, nor further quantities till December 1976. There was a stock (July 1976) of 1,246 tonnes of steel sheets available in the factory sufficient for about 4 months' production (2 lakh jerricans) in addition to a reserve of 1,212 tonnes sufficient to meet another 4 months production. Nevertheless, on the advice of the DGOF, the factory raised (August 1976) a demand on him for import of 5,000 tonnes of steel sheets. Based on actual requirement of steel sheets to meet the service orders for jerricans in hand, the demand was accepted (October 1976) by the Associated Finance Wing for 3,355 tonnes.

Against factory 'A' 's demand of August 1976 for steel sheets an order was placed on 17th January 1977 by the SAIL International Limited on a foreign firm for supply of 3,355 tonnes of the material at a total cost of Rs. 102.66 lakhs. The purchase was to be financed from the General Credit (1975-76) of the foreign Government and it was approved (17th March 1977) by both the Government of India and the foreign Government. In the meantime against the indent of May 1975, the HSL supplied 635.810 tonnes of steel sheets during August 1976 to December 1976. Against the total monthly requirement of factory 'A' for 470 tonnes of steel sheets indicated (October 1976) by the DGOF, the HSL assured (January 1977) supply of 450 tonnes per month on an average and to make all efforts to increase the monthly supply to 500 tonnes. The HSL apprised (12th February 1977) the DGOF that the availability of steel sheets had been increased to 470 tonnes per month and that supplies at this rate would be maintained. The HSL actually supplied 197.990 tonnes and 497.350 tonnes of steel sheets during January and February 1977 respectively. On 7th March 1977 only, the DGOF asked factory 'A' to cancel the order on the SAIL International Ltd. for import, but factory 'A' stated (12th March 1977) that the contract for import had already been concluded and that the deliveries were due to start in February/March 1977. The Ministry of Defence stated (October 1980) that the clearance for import was given (October 1976) by SAIL after assessing the prospects of indigenous production of steel sheets and that the terms and conditions of supply were confirmed to the foreign firm by SAIL International Limited before the commitment for improved supplies was received from the HSL. Thus, no action was taken to get the import contract cancelled/modified in January 1977 when an assurance of supply of steel sheets from the HSL became available.

Against the indent of May 1975 on the HSL, factory 'A' received in all 4,408 tonnes of steel sheets from the HSL till 2nd December 1977 after which further supplies were stopped by the HSL at the request of factory 'A' made in October 1977. Thus, the requirement of factory 'A' was fully met with indigenous supplies and on 15th December 1977, about 1,946 tonnes of the material (sufficient to cover 11 months' requirement based on annual production programme of 3.50 lakh jerricans during 1977-78 and 1978-79) had accumulated in the factory. Against the order of January 1977 on the foreign firm, 3,232 tonnes of imported steel sheets, shipped in May 1977, were received by factory 'A' in August 1977. With these supplies, there were about 4,787 tonnes of steel sheets (sufficient for about 27 months' requirement) at the end of December 1977. Owing to substantial stock, factory 'A' placed the subsequent order for 2,000 tonnes of the material on the HSL only in August 1978 against which about 1,130 tonnes were received during January 1979 to July 1980.

Out of the imported (August 1977) stock (3,232 tonnes), 1,288 tonnes were lying unutilised in factory 'A' at the end of July 1980. Besides, there was a stock of 365 tonnes of indigenous material in regular stock and 1,212 tonnes in reserve. The import of the material (cost Rs. 152.70 lakhs : Rs. 106.94 lakhs in foreign exchange and Rs. 45.76 lakhs for customs duty) which involved extra expenditure of Rs. 42.60 lakhs as compared to the cost of indigenous material could have been avoided, had the import order been cancelled in February 1977 when the indigenous supplies improved and the undertaking been given additional orders to continue supply on completion (September 1977) of the indent of May 1975.

14. Manufacture of steel helmet in a factory

Against three indents placed by the Director of Ordnance Services (DOS) in March 1964, March 1967 and August 1968, the Director General, Ordnance Factories (DGOF) placed orders on factory 'X' in April 1964, April 1967 and November 1968 respectively for supply of a total quantity of 55,640 steel helmets of type 'A'. The supplies against the first two orders were to be made as early as possible and those against the third one by September 1969.

The particular type of helmet was a new item of manufacture at factory 'X'. However, the factory placed orders during April 1964 to September 1968 on factory 'Y' for 5,640 steel bodies to cover full requirements against the indents of March 1964 and March 1967. The steel bodies (cost : Rs. 4.10 lakhs) were received during 1967 to 1977; other items of materials (cost : Rs. 5.63 lakhs) required in the manufacture of helmets against these two indents were also procured from trade during 1966 to 1976.

Meanwhile, due to revision of requirements, the Ministry of Defence proposed (January 1969) cancellation of two indents (March 1964 and August 1968) for 55,000 steel helmets. As orders for raw materials had already been placed against the indent of March 1964, this indent (5,000 numbers) was allowed (December 1969) to stand in order to establish production and to avoid financial repercussions and the other indent (50,000 numbers) was cancelled (December 1969).

Trial manufacture of one sample helmet undertaken in May 1970 was completed in April 1971, but rejected by the Controller of Inspection, General Stores (CIGS) who was the "Authority Holding Sealed Particulars" due to failure of the steel body in magnetic induction test and other defects. However, a warrant for bulk manufacture of 619 helmets was issued by factory 'X' in April 1972, but no supply could be made pending clearance of a sample. After several advance samples submitted by factory 'X' were rejected on various grounds, a fresh sample submitted in June 1978 was approved by the CIGS in July 1978 for bulk production subject to elimination of a defect of looseness of the clip. A second warrant for production of 400 numbers of type 'A' helmet was issued by factory 'X' in October 1978. However, against the two warrants, no complete helmet was produced. The Additional DGOF, Ordnance Equipment Factories (OEF), stated (August 1980) that the orders being trial orders indicating delivery as early as possible, these were accorded low priority in production.

Meanwhile, even long before type 'A' helmet was approved (July 1978) by the CIGS for bulk production in factory 'X', another helmet type 'B', which was under development by the Research and Development Organisation since 1962, was approved (March 1976) by the Director General of Inspection for use of the defence services and type 'A' helmet was declared obsolescent. While forwarding a set of sealed drawing particulars of type 'A' helmet to factory 'Y' under intimation to factory 'X', the CIGS mentioned (July 1976) that type 'B' helmet had superseded type 'A'. However, as factory 'X' did not receive any intimation from the DOS to discontinue further action on the indents of 1964 and 1967 in view of the changed position, it continued with the establishment of production of type 'A' helmet. Only in November 1978, about 4 months after acceptance of type 'A' helmet for bulk production in factory 'X', the DOS intimated the DGOF that as type 'A' helmet had been replaced by type 'B', the indents of 1964 and 1967 could be treated as cancelled/withdrawn. The DOS also expressed (May 1979) surprise as to how clearance for bulk production of type 'A' helmet was given (July 1978) by the CIGS when the paper particulars for type 'B' had already been sealed (March 1976) by him. The DOS felt that the clearance had been issued by the CIGS due to oversight. The Additional DGOF (OEF), however, stated (August 1980) that production activities could be suspended only after receipt of intimation regarding cancellation from the indentor and that as no advice regarding cancellation of the indents was received from the DOS till November 1978, the submission of the sample and its clearance prior to that date was in order.

The case disclosed the following main points :

— Although the indents for type 'A' helmet were placed in March 1964 and March 1967, factory 'X' took about 14 years to produce an acceptable sample and by the time it was produced, it was superseded by type 'B' helmet.

— Although the paper particulars of type 'B' helmet were sealed (March 1976) by the CIGS, he cleared (July 1978) through oversight, the sample of type

'A' helmet produced by factory 'X' for bulk production and the indents were not cancelled by the DOS till November 1978 due to lack of proper coordination with the CIGS and factory 'X'.

— Even before establishment of manufacture of type 'A' helmet, factory 'X' procured steel bodies (cost : Rs. 4.10 lakhs) and other materials (cost : Rs. 5.63 lakhs) for bulk manufacture.

— The cost of material alone, which would be rendered surplus in factory 'X' as a result of cancellation of orders was assessed (September 1979) by the Additional DGOF at Rs. 9.03 lakhs; there was no alternate use for the surplus material.

15. Closure of a development project

In paragraph 7 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1977-78, mention was made of the closure of a project sanctioned (May 1967) for the design and development of equipment 'A' after an expenditure of Rs. 0.56 crore was incurred on it.

In September 1968, Government sanctioned another project for design and development of equipment 'B' for operational role. The project envisaged manufacture of two prototypes at a cost not exceeding Rs. 20.20 lakhs. For production of the equipment by 1972, the sanctioned amount was revised (December 1968) to Rs. 40.40 lakhs for manufacture of four prototypes so that user trials could be carried out in different regions simultaneously. The amount was further increased to Rs. 76.66 lakhs (January 1971) and then to Rs. 83.66 lakhs (May 1974) to cover escalation in prices, additional requirements of spares and accessories, etc.

The development work was entrusted (September 1968) to a Research and Development Establishment (RDE) and the design of the equipment was completed by March 1970. The prototypes as per design finalised were to be manufactured—two by June 1971 and two by December 1971—by a departmental factory. Considerable delay, however, took place in completing manufacture of the prototypes. Only one set of engine and transmission assembly out of four sets ordered (February 1969) on foreign firms was received in December 1970, the rest were received only by June 1972. Against an order placed (September 1970) by the factory for four hulls on a public sector undertaking, two were received in May 1971 as against the stipulated delivery date of January 1971. As the undertaking expressed (August 1971) its inability to supply the remaining hulls due to other commitments and the departmental factory also declined (March 1972) to manufacture these on similar grounds, their manufacture was entrusted in November 1972 to the RDE.

After machining the hulls (received from the undertaking) at the factory, the assembly of the first and second prototypes was completed by June 1972 and August 1972 respectively. Technical trials on the first prototype were commenced in August 1972 and completed in March 1974. The user trials were commenced in May 1974 and completed in October 1974; the performance was found to be satisfactory except for a few defects which were to be removed.

Meanwhile, the factory was given (September 1970) a programme for manufacture of 1,400 numbers of equipment 'B', as desired by the Army, during 1974-75 to 1979-80. While the defects in the prototype were under rectification, the Army, however, observed (August 1975) that as per production schedule drawn up by the Department of Defence Production, about 700 numbers of the equipment could be supplied to them only by 1984 (commencing trickle production from 1979-80), by which time it would be outdated and that it would be better to have a more modern equipment which might be in service through the 1990s. Accordingly, it was considered in August 1975 that indigenous production of equipment 'B' should be given up and the possibility of manufacturing a more modern equipment, under licence agreement, explored. The development project was, therefore, fore-closed in August 1976 (expenditure incurred : Rs. 59 lakhs) as respects services' requirements, but as bulk of the expenditure on the project was already committed/ spent and the remaining work was expected to be completed by incurring an additional expenditure of only Rs. 3 lakhs, it was allowed to be continued as research and development competence efforts which would be useful when called upon to develop the modern equipment. The Ministry of Defence stated (January 1978) that :

— the project had to be closed due to unacceptable production schedule and a major conceptual change in users' requirements; and

— the expertise generated was being put to full use in handling other projects.

Thus, the project of design and development of equipment 'B' started in September 1968 was finally closed in July 1979 after spending Rs. 78.30 lakhs. Meanwhile, the Army placed (June 1976) an order for import of 70 numbers of a more sophisticated equipment at a total cost of Rs. 1260 lakhs, deliveries against which had already started (October 1980).

16. Purchase of ferro-molybdenum

Against a demand (September 1977) of factory 'A' the Director General, Ordnance Factories (DGOF) placed (March 1978) two supply orders for 28 tonnes of ferro-molybdenum at Rs. 1.30 lakhs per tonne on firms 'P' and 'Q' (14 tonnes on each) to be delivered by May 1978 and June 1978 respectively. According to the supply orders the material was to be inspected by factory's inspectors at the firms' premises before despatch.

Although firm 'P' requested (7th April 1978) for inspection of material to be arranged between 20th and 22nd April 1978, factory 'A' 's inspectors inspected 10.3 tonnes of the material during 9th May to 17th May 1978 and issued relevant inspection note only on 12th June 1978 due to delay in chemical test of the material through another ordnance factory; the lot was despatched by firm 'P' on 19th June 1978. After completion of the chemical test of the first lot already inspected, the remaining 3.7 tonnes of the material was inspected during 17th July to 21st July 1978; the inspection note was released on 16th August 1978 although the material was despatched on 14th August 1978.

In regard to the second contract, firm 'Q' requested factory 'A' thrice on 12th May, 30th May and 7th June 1978 to send inspectors immediately to inspect a part quantity (actual quantity was not mentioned) of the material lying with it. The factory inspectors, however, visited firm 'Q' only on 25th June 1978 and completed inspection on 30th June 1978 of 9 tonnes of the material (submitted by firm 'Q') and this material was received in July 1978 by factory 'A'. Firm 'Q' intimated (July 1978) to the DGOF (copy to factory 'A') that the balance 5 tonnes could have also been supplied within the stipulated period (June 1978) if the inspectors had come earlier as per its requests. The Ministry of Defence attributed (October 1980) the delayed visit of the inspectors to non-availability of experienced staff at factory 'A' and added that had firm 'Q' any intention to supply the balance 5 tonnes within the scheduled delivery period, it could have done so as the factory inspectors were at the firm's premises till the last date of the validity period (30th June 1978).

In order to enable firm 'Q' to supply the balance 5 tonnes, the DGOF extended (28th July 1978) the delivery period till 10th September 1978. Although firm 'Q' requested factory 'A' on 22nd August 1978 and again on 28th August 1978 to depute inspectors on 1st September 1978 to inspect the material so that it could be despatched within the extended period (10th September 1978), the inspectors left for firm 'Q' only on 2nd October 1978. Meanwhile, after expiry of the extended period, firm 'Q' informed the DGOF on 22nd September 1978 that as the inspectors had failed to report and as no message was received from factory 'A' regarding the inspection, it had disposed of the material and also informed factory 'A' on 30th September 1978 (received by the factory on 3rd October 1978) that it had cancelled the order due to failure of the factory to inspect the material within the validity period. The inspectors reached firm 'Q' on 5th October 1978 but the material was not offered for inspection. As factory 'A' had failed to send the inspectors within the extended delivery period and as meanwhile, the market price of the material had increased considerably, the DGOF stated (November 1978) that it was not possible to bind firm 'Q' legally to supply the balance material at the original contract price. The Ministry of Defence stated (October 1980) that it was not possible to arrange inspection at firm's premises within the extended delivery period (10th September 1978) due to very short time left, but added that instructions were being issued to the factories for attending to the inspection calls with utmost urgency to avoid such occurrences in future.

To meet production requirement of factory 'A', the DGOF placed (May 1980) supply orders on four firms (including the same firm 'O' for 4 tonnes) for 16.889 tonnes of ferro-molybdenum at Rs. 2.95 lakhs per tonne as against Rs. 1.30 lakhs per tonne contracted in March 1978 with firm 'Q'. Out of this, factory 'A' had received 14.873 tonnes till 8th October 1980. The extra expenditure involved in the procurement of 5 tonnes of the material would, thus, be Rs. 8.25 lakhs. Had factory 'A' kept in touch with firm 'Q' after the delivery period was extended (July 1978) and suitably planned the deputation of its inspectors within the extended delivery period, the extra expenditure of Rs. 8.25 lakhs would have been avoided.

17. Manufacture of woollen blankets in an ordnance factory

Woollen blankets conforming to specification 'A' were obtained by the Director of Ordnance Services (DOS) for defence personnel from trade through the Director General, Supplies and Disposals (DGSD). For establishing manufacture of the blankets in the ordnance factories in order to discipline the trade in regard to quality, price and timely supply, the DOS placed (March 1974) an indent on the Additional Director General Ordnance Factories (Addl. DGOF) for supply of

1.50 lakh blankets (conforming to specification 'A') by June 1976 at an estimated cost of Rs. 50.67 each, which would be comparable with the prevailing trade cost (Rs. 49.06 each). The Addl. DGOF in turn placed (April 1974) orders on factory 'P' for manufacture and supply of the blankets at the rate of 50,000 numbers per year from 1974-75.

2. *Implementation of the scheme.*—Although the blankets were planned to be supplied from 1974-75, orders for the requisite machines were placed on trade during January 1975 and December 1975; these machines (cost : Rs. 1.91 lakhs) were received between May 1975 and March 1976. In December 1976 and again in December 1978 additional machines, *viz.* warping machine, milling machine, etc. were found necessary to achieve the target capacity (50,000 blankets per year). These machines (cost : Rs. 1.27 lakhs) were procured only between March 1979 and October 1979. The Ministry of Defence stated (October 1980) that the procurement of the additional machines was delayed as the cost of production of blankets with the raw material available in the market *vis-a-vis* the trade cost of made-up blankets was under study.

In the case of supplies of made-up blankets to the DOS from trade, these were inspected as per specification 'A', but there was no separate specification laid down for the woollen yarn to be used by the trade for production of blankets. Specification for the yarn for manufacture of blankets at factory 'P' was finalised only in February 1975. Factory 'P' placed two indents on the DGSD in March 1975 and May 1978 for supply of a total of 4.98 lakh kgs. of yarn and a supply order on firm 'X' in October 1975 for 7,500 kgs. at Rs. 16 per kg.

While the supplies against the order on firm 'X' materialised during 1976-77, the DGSD could finalise contracts (due to non-receipt of suitable offers against tender enquiries) with firm 'Y' only in September 1976 for 1 lakh kgs. at Rs. 22 per kg. and with firm 'Z' in January 1978 for 1 lakh kgs. at Rs. 23.90 per kg. However, inspite of extensions of delivery period, firm 'Y' failed to make supply and the contract was cancelled (March 1978). The contract with firm 'Z' was also cancelled (May 1978) as the firm did not furnish the stipulated security deposit. Subsequently, the DGSD concluded two fresh contracts at higher rates with firm 'X' in July 1978 for 1 lakh kgs. of yarn at Rs. 28 per kg. and in October 1978 for 1.62 lakh kgs. at Rs. 29.59 per kg. Against these contracts, factory 'P' had received the supplies (2.62 lakh kgs.) during July 1978 to September 1979. Thus, the procurement of 2 lakh kgs. of yarn, which were not supplied by firms 'Y' and 'Z' against the contracts of September 1976 and January 1978, involved an extra cost of Rs. 11.69 lakhs.

3. *Production of blankets.*—According to the indent placed (March 1974) by the DOS for 1.50 lakh blankets, 50,000 numbers were to be supplied by December 1974, another 50,000 during April 1975 to June 1975 and the remaining during April 1976 to June 1976. As the machines and the yarn were not in position, factory 'P' could commence production of the blankets only in June 1976 with 2 power looms of 80 inches width (cost : Rs. 0.27 lakh) procured in July 1975, using the yarn procured locally during 1976-77 through supply order. However, the blankets produced (328 numbers; cost Rs. 0.22 lakh) on these power looms were not considered (June 1976) acceptable by the Inspectorate for defence use as they fell short of width due to shrinkage in felting and milling operations. In order to provide greater margin for shrinkage, factory 'P' procured (August 1976) additional 10 power looms of 84 inches width (cost : Rs. 1.90 lakhs) production on which commenced from February 1977. Factory 'P' had supplied 36, 1,386, 4,050 and 30,000 numbers of blanket to the DOS during 1976-77, 1977-78, 1978-79 and 1979-80 respectively at a total cost of Rs. 43.16 lakhs. Thus, the envisaged supply of 50,000 numbers of blanket annually from 1974-75 to the DOS was not achieved till March 1980. Meanwhile, due to failure of factory 'P' to supply according to delivery schedule, procurement of 50,000 blankets was switched over (July 1975) by the DOS to the DGSD and the order on factory 'P' reduced (June 1976) to 1 lakh

numbers. The Ministry of Defence stated (October 1980) that the production at factory 'P' was expected to be about 34,000 blankets during 1980-81.

4. *Economy in manufacture.*—The indent for 1.50 lakh blankets was placed (March 1974) on the Addl. DGOF on the consideration that the cost of the blankets to be supplied would be comparable with the trade cost using the same type of wool as used in the trade. The Department of Defence Production, however, observed (February 1978) that the price of the yarn specified (February 1975) for manufacture of the blankets at factory 'P' was very high and that the blankets produced from the same were likely to be costlier than the made-up blankets obtained from trade; although the blanket was not an item of production in the ordnance factories and only 50,000 blankets were planned to be produced annually at factory 'P' while about 9 lakh blankets were being procured from trade per year, the production of the blankets was continued at factory 'P' inspite of its likely high cost of production. Against the trade costs varying from Rs. 68.85 to Rs. 77.95 each as per the contracts concluded by the DGSD during March 1977 to June 1979 for supply of blankets of specification 'A' to the DOS, the cost of supply per blanket of the same specification by factory 'P" was Rs. 117.47 (material cost : Rs. 100.12) and Rs. 123.19 (material cost : Rs. 106.14) during 1978-79 and 1979-80 respectively. Further, during October 1979 to March 1980, factory 'P' had supplied blankets of a revised specification at Rs. 126.26 each (material cost : Rs. 108.94) as against trade cost of Rs. 104 per blanket (September and October 1979) of such specification. Thus, the DOS had incurred extra expenditure of about Rs. 11.76 lakhs, as compared with the trade cost, in the procurement of 34,050 blankets from factory 'P' during 1978-79 and 1979-80 alone.

5. The case revealed the following main points :

— For manufacture of blankets factory 'P' had to procure 2 lakh kgs. of yarn at higher rates which were not supplied by firms 'Y' and 'Z' against the contracts of September 1976 and January 1978 involving an extra cost of Rs. 11.69 lakhs.

— It took 3 years to establish the manufacture of blankets in factory 'P' and only 35,472 numbers were supplied during 1976-77 to 1979-80 at higher cost against an indent of 1.50 lakh blankets while 9 lakh blankets per year were procured from trade.

— Although the cost of supply by factory 'P' was expected to be comparable with the trade cost, it actually worked out to be considerably higher and extra expenditure of Rs. 11.76 lakhs was incurred by the DOS in the procurement of 34.050 blankets from factory 'P' during 1978-79 and 1979-80 alone.

18. Delay in procurement of shunting locomotives

In order to replace the two existing locomotive shunters (procured in 1963), which were grounded (April 1971) as they had outlived their useful lives (5 years) and were beyond economical repairs, factory 'A' placed a demand on the Director General, Ordnance Factories (DGOF) through the Local Accounts Officer (LAO) only in May 1972 for urgent procurement of 2 shunters (each of 154 horse power) at an estimated cost of Rs. 4.00 lakhs each. The replacement was on like-to-like basis and the estimated cost of procurement which was raised (September 1972) to Rs. 4.18 lakhs each, was based on a quotation of firm 'X' given in January 1972 and revised in June 1972.

On receipt (July 1972) of the demand through the LAO, the DGOF approached the Associated Finance Wing in October 1972 for concurrence to the procurement of 2 shunters. Although replacement of the existing 2 shunters was considered by factory 'A' to be of urgent necessity, there was protracted correspondence among the DGOF, the Associated Finance Wing and factory 'A' on the necessity of procurement of the new shunters. While the correspondence was continuing, factory 'A' informed (March

1974) the DGOF that firm 'X' had discontinued (1974) manufacture of the shunters and that the shunters (205 horse power each) produced by firm 'Y' could be considered for procurement at an estimated cost of Rs. 8.25 lakhs each quoted by firm 'Y' in March 1974. It was also added (November 1974) that the factory had opted for shunters of higher capacity as that was the only size available indigenously and that the minimum requirement was for 2 shunters. The Associated Finance Wing, however, concurred (February 1975) for only one shunter (205 horse power) and suggested that the proposal for procurement of the other shunter could be resubmitted after the actual cost of the first and the time required for its supply were known. However, the indent for procurement of one shunter was placed by the DGOF on the Director General, Supplies and Disposals (DGSD) only in November 1975 after 9 months of the financial concurrence to its procurement, against which a contract was concluded with firm 'Y' in July 1976 for its supply by July 1977 at Rs. 9.59 lakhs (including spares of Rs. 0.59 lakh). The proposal for the other shunter, however, was resubmitted by the DGOF only in April 1978. This was concurred by the Associated Finance Wing in November 1978 and against an indent placed in January 1979, the DGSD concluded a contract with firm 'Y' in March 1980 for supply of the shunter by January 1981 at Rs. 9.46 lakhs.

The shunter contracted in July 1976 was received by factory 'A' in August 1977 and commissioned in September 1977. The other one contracted in March 1980 was yet (August 1980) to be delivered. Thus, though the two old shunters were grounded in April 1971, the replacement of one took over 6 years and that of the other was still (August 1980) awaited. The Ministry of Defence stated (August 1980) that though factory 'A' initiated the proposal for replacement of the shunters in time after expiry of their normal life of 5 years, the replacement was delayed due to non-clearance of the proposal by the Associated Finance Wing which was pressing for their utilisation after repairs due to paucity of funds and economic restrictions. However, while the normal life of the shunters expired in 1968, the demand for their replacement was placed after about 3 years in May 1972. The Appropriation Accounts of the Defence Services for 1973-74 also showed that Rs. 143 lakhs out of final grant provided for procurement of plant and machinery for the ordnance factories during 1973-74 were surrendered.

Due to inadequate number of shunters in factory 'A' owing to the delay in replacement of the worn-out shunters, factory 'A' had to pay Rs. 23.75 lakhs on account of demurrage charges for detention of wagons beyond prescribed period during April 1971 to December 1979. Had the replacement of the shunters been made in time, extra expenditure of Rs. 9.89 lakhs (computed with reference to the offer of firm 'X' given in 1972) would have been largely avoided, besides the demurrage charges of Rs. 23.75 lakhs.

19. Delay in execution of export orders

Ammunition 'X' had been in production at factory 'A' prior to 1963-64 for supply to the services. The production of the ammunition was discontinued in the factory after 1966-67 as there was no order from the Director of Ordnance Services (DOS). In October 1972, the Ministry of Defence entered into a contract with a foreign Government for supply of 2,755 numbers of ammunition 'X' by 1st April 1973 at Rs. 207 each. Later, the foreign Government placed two more purchase orders in November 1973 and May 1974 for additional 3,000 numbers. The prices against these two orders were not fixed.

Against the contract of October 1972, the Director General, Ordnance Factories (DGOF) placed an extract on factory 'A' in February 1973. The extract was, however, cancelled in March 1974 as the DOS agreed (February 1974) to supply the ammunition from his stock. The supply, however, did not materialise as the DOS stock was of very old vintage, which fact the DOS failed to consider earlier, and 3 new extracts were placed on factory 'A' in November 1974 and December 1974 for 5,755 numbers of ammunition 'X' to be supplied to the foreign Government as early as possible without specifying a fixed delivery schedule though the supply date against the contract of October 1972 had already expired (April 1973).

On receipt of the extract of February 1973, factory 'A' placed (March 1973) an order on factory 'B' for 1,006 numbers of empty shells for ammunition 'X'. Subsequently, another order was placed in January 1975 for additional 4,929 numbers of shells. Although the empty shells were to be urgently supplied, factory 'A' received in all 3,585 empty shells from factory 'B' in over three years (606 numbers in November 1975, 1,979 numbers in May 1976 and 1,000 numbers in June 1976). For production of 3 components of container for the ammunition, factory 'A' requested the Senior Inspector of Armament (SIA) only in July 1976 to approve use of steel sheets of an earlier specification available in stock and used in the past for manufacture of ammunition 'X' supplied to the services in lieu of existing specification (considered to be difficult to procure for the small quantity involved). The approval was accorded only in June 1977 after protracted correspondence. The Ministry of Defence stated (December 1980) that since no difficulty was visualised in the acceptance of the material of old specification, the SIA was requested (July 1976) to accord approval to its use only when empty shells became available to commence production.

Meanwhile, in April 1976, the foreign Government requested the Ministry for cancellation of the order of May 1974 for 1,000 numbers of ammunition 'X' which was to be delivered in the second quarter of 1975, in case the supplies against the order were not available till 1977. Although the foreign Goverment was informed (April 1976) that the delivery was expected to be made in July and August 1976, the order was cancelled (May 1976) by that Government. As the price of the ammunition (Rs. 207 each) against the contract of October 1972 was very low in comparison with the production cost (Rs. 519

each) at factory 'A', the foreign Government was informed (July 1976) by the Ministry that this contract had also been cancelled. Factory 'A' completed production of 2,000 numbers of the ammunition against the remaining order of November 1973 only in November 1977. Of these, 1,000 numbers were cleared in proof by the Inspectorate in March 1978 and the other 1,000 numbers in March 1979. However, the Ministry intimated (March 1979) the DGOF and factory 'A' that the order had been cancelled by the foreign Government.

Factory 'A' proposed (March 1979) to the DGOF that 2,000 numbers of ammunition 'X' produced against the order of the foreign Government could be diverted to the services to avoid financial loss. Since the services had no requirement, the Ministry directed (June 1980) the DGOF to store the ammunition till an export demand materialised for which attempts were being made. According to the Ministry, the cost of the ammunition and raw materials lying in factory 'A' owing to the cancellation of the orders was about Rs. 14.32 lakhs. Thus, failures of factories 'A' and 'B' to execute the orders in time resulted in locking up of Rs. 14.32 lakhs in the manufacture of ammunition and raw material.

20. Unnecessary purchase of castings at high cost

Since 1964-65, an ordance factory was obtaining sand moulded grey iron castings (types 'X' and 'Y') for two components of the engine of a heavy vehicle (produced in the factory) from a public sector undertaking; the supplies made by the undertaking during 1974-75 were paid for at Rs. 319 and Rs. 357 per casting 'X' and 'Y' respectively.

In order to develop an alternative source of supply of the castings, the factory placed (April 1975) an order on firm 'A' for 200 numbers of each of the two castings 'X' and 'Y' at Rs. 112 per casting. Later, the factory approached (November 1976) firm 'B' to develop the castings and invited (November 1976) quotation from it for 200 numbers of each type. The firm quoted

(November 1976) a rate of Rs. 100 each for shell moulded castings (stated to be superior to sand moulded castings) and a lump sum amount of Rs. 25,000 as tooling charges. Firm 'B' stated (November 1976) that once the initial samples were approved, it would supply whatever quantity might be required by the factory, at a monthly rate of 200 to 300 numbers of each casting. It added (December 1976) that 5,000 castings could be supplied from the same pattern without additional tooling charges. The factory placed (December 1976) a development order on firm 'B' for 200 numbers of each of the two castings at the above quoted rates to be supplied at 100 numbers per month commencing within 4 weeks after approval of samples.

Against the order of April 1975, firm 'A' failed to supply samples and the quantity on order was reduced (June 1977) from 200 to 50 numbers of each casting. Firm 'A' completed the order only in June 1979.

Against the order of December 1976, firm 'B' submitted the samples of castings 'X' and 'Y' in August 1977 and December 1977 respectively; the samples of casting 'X' were approved for bulk production in September 1977 and those of casting 'Y' in February 1978. Firm 'B' made trickle supplies of the castings in December 1977 and commenced bulk supplies from February 1978; it supplied in all 198 numbers of casting 'X' and 202 numbers of casting 'Y' by May 1978. Against another order placed (March 1978) on it for supply of 500 numbers of each casting (cost : Rs. 95 per casting) at the rate of 100 numbers of each or more per month immediately after completion of the order of December 1976, supplies (493 numbers of casting 'X' and 508 numbers of casting 'Y') were received during May 1978 to February 1979 at a monthly average of 55 numbers of casting 'X' and 56 numbers of casting 'Y' as against the factory's monthly average utilisation of 26 to 28 numbers of each casting during 1977-78 and 1978-79. The factory placed a third order on firm 'B' in August 1979 for 210 numbers of casting 'X' at Rs. 110 each; against this, 202 numbers were received during October and November 1979.

Meanwhile, the factory had accumulated a stock (April 1978) of 254 numbers of casting 'X' and 182 numbers of casting 'Y' sufficient to meet its production requirement for 9 months and 7 months respectively based on the rate of utilisation during 1977-78. Firm 'B' had successfully developed the castings at economic rates and was able to make supplies according to the requirement of the factory. Nevertheless, orders were placed on the undertaking for 580 numbers of casting 'X' (400 in May 1978 and 180 in March 1979) at Rs. 538 per casting and for 315 numbers of casting 'Y' (275 in May 1978 and 40 in September 1979) at Rs. 604 and Rs. 620.23 per casting respectively. Against these orders, the factory received 589 numbers of casting 'X' and 330 numbers of casting 'Y' (total cost : Rs. 5.16 lakhs) during September 1978 to November 1979.

The Ministry of Defence stated (October 1980) that to meet the urgent requirements of the services for 528 numbers of casting 'X' and 354 numbers of casting 'Y' during 1978-79 and 1979-80, the orders were placed on the undertaking. The fact, however, was that in March 1980 the factory carried a stock of 1,114 numbers of casting 'X' and 893 numbers of casting 'Y' (total value : Rs. 6.08 lakhs). The purchases of the castings from the undertaking against the 3 orders of May 1978, March 1979 and September 1979 at a total cost of Rs. 5.16 lakhs, involving extra expenditure of Rs. 4.26 lakhs computed with reference to the rates of firm 'B', would appear to be quite unnecessary.

21. Unfruitful manufacture of an ammunition

A special ammunition developed in 1959-60 by an Armament Research and Development Establishment (ARDE) at the request of the Ministry of Home Affairs (MHA) was approved (April 1962) for riot control purposes after technical and user's trials (December 1960 to February 1961) and indents for supply of 234.82 lakh rounds of the ammunition were placed on the Director General, Ordnance Factories (DGOF) between August 1962 and January 1963.

Manufacture of the ammunition on a small scale was taken up by an ordnance factory in August 1962, but it was suspended in October 1962 due to other priority jobs and non-availability of its components from trade. In July 1964 when bulk production of the ammunition was taken up, defects in the ammunition relating to charge assessment, bullet lodge, variation in velocity, etc. were noticed. Further production was, therefore, suspended (November 1964) and the factory referred (November 1964) the matter to the Chief Inspector of Armament who was the Authority Holding Sealed Particulars (AHSP) for investigation and advice. Simultaneously, the factory suggested (November 1964) use of an alternative propellant which the AHSP approved in April 1965. Though production of the ammunition was recommenced (May 1965) with the alternative propellant, it was found that the problem of 'bullet lodge' persisted which was stated (March 1967) by the AHSP to be a critical defect inherent in the design of the ammunition. The DGOF also apprised (March 1967) the Ministry of Defence that tests carried out on ammunition assembled under bulk manufacture conditions had indicated that the requirements in regard to norms of velocity variation and its casualty proof properties could not be realised with the existing design and that until such time as a satisfactory design was evolved it would not be possible to plan further production of the ammunition. However, after investigation on the bullet lodging, the ARDE concluded (June 1968) that a combination of another propellant 'X' and cap filled with a new composition would be most suitable for the ammunition and the factory was asked (June 1968) to undertake mass production with the new combination. The factory commenced production of the ammunition with the new combination from July 1968.

Meanwhile, although the defects persisted, supplies of the ammunition to the MHA, which started in 1963, continued to be made; in all 31.58 lakh rounds were supplied till March 1967 and 2.73 lakh rounds thereafter (January 1969 to May 1969) and were accepted after inspection. However, the manufacture of the ammunition was suspended in October 1969 at the instance (August 1969) of the MHA in view of the various defects, viz.

lesser sound, low velocity, poor accuracy and bullet causing bigger wounds. Another 5.52 lakh rounds of ammunition, which were produced before the manufacture was suspended, were also supplied to the MHA during March 1970 to August 1972. Of the total supplies of 39.83 lakh rounds (cost : Rs. 15.94 lakhs) made, 35.12 lakh rounds were produced with the old propellant.

It was decided (August 1971) by the MHA to use the defective ammunition for practice purposes only, but even this could not be achieved due to bullet lodging. Out of about 28 lakh rounds of ammunition available with the users in February 1978, about 20.76 lakh rounds were backloaded to the factory till August 1980; these were broken down and accounted for as scrap. Of the stores and components (cost : Rs. 12.67 lakhs) which became surplus to requirement of the factory as a result of suspension of manufacture of the ammunition, only one item (bullet) worth Rs. 3.27 lakhs had been melted. The expenditure incurred in breaking down 20.76 lakh rounds ammunition and melting of the bullets was awaited (October 1980).

Thus, the loss of about Rs. 29 lakhs (excluding cost of scraps recovered and expenditure incurred in breaking down of the defective ammunition and melting of the surplus bullets) on account of defective ammunition and surplus materials had resulted from defective design of the ammunition and/or inadequate trials with the propellants used; no investigation was made to fix responsibility for the loss. The Ministry of Defence stated (November 1980) that as the ammunition was produced as per design particulars and inspected by the inspectorate before supply, the factory could not be held responsible for the supplies held as defective.

22. Unnecessary purchase of material

Factories 'A', 'B' and 'C' were authorised to hold stock piles of 0.51, 74.62 and 52.35 tonnes respectively of ferro-tungsten, required for manufacture of special steel, in March 1956, November 1960 and January 1970 respectively. Against the authorisations, factory 'A' had been holding the authorised level since July

1959 and factory 'B' had in stock 65.24, 72.86 and 74.62 tonnes from March 1970, January 1971 and March 1972 respectively. Although factories 'A' and 'B' had no consumption of ferro-tungsten since 1970 due to non-existence of orders, the question of transferring the material to factory 'C', which required it, was not considered by the Director General, Ordnance Factories (DGOF) though periodical reports of the holdings and requirements of the material for end products were being furnished by the 3 factories to him and factory 'C' procured about 35 tonnes of the material (cost : about Rs. 36 lakhs) during 1971 to 1974 from trade. After the review of the requirement for the material during October 1975 to September 1979 made by factories 'A', 'B' and 'C' between November 1975 and February 1976, factory 'C' placed two more orders on firms 'X' and 'Y' in September 1976 for 9.5 tonnes of the material at a total estimated cost of Rs. 13.66 lakhs. However, only after review of the requirement up to March 1980 in the 3 factories, the DGOF observed (December 1976) that as against the total stock of 95.36 tonnes available in the 3 factories, the maximum consumption was expected to be about 48 tonnes at factory 'C' and that there would be no requirement of the material at factories 'A' and 'B'. Meanwhile, firm 'X' had completed supply of 3.5 tonnes (cost : Rs. 5.49 lakhs) against the supply order of September 1976 during October to December 1976. The order placed (September 1976) on firm 'Y' for 6 tonnes was, therefore, cancelled in December 1976. However, the cancellation was subsequently withdrawn in January 1977 as the firm had already manufactured the material. The material (6 tonnes; cost : Rs. 9.60 lakhs) was received by factory 'C' in February 1977. The Ministry of Defence stated (December 1980) that stock piles were meant for emergent situation and that the materials from these stocks were not required to be transferred for normal use when the same were available in the market. However, the rules provided regular review of stock pile holding (which was not done earlier) and in June 1977, the stock pile (0.51 tonne) at factory 'A' was withdrawn and in March 1979 the Ministry of Defence approved reduction of the stock pile level from 126.97 tonnes (factory 'C' : 52.35 tonnes, factory 'B' : 74.62 tonnes) to only 25 tonnes. The quantities so reduced in the 3 factories were to be transferred to working stock for normal use. At the end of March 1980, factories 'A', 'B' and 'C' had a total stock of about 64 tonnes (in addition to 25 tonnes as stock pile) of the material. Based on past consumption of the material (58.024 tonnes during October 1975 to March 1980) in factory 'C', the existing working stock (64 tonnes) would continue for about 5 years. Had the DGOF reviewed the stock piles in time and transferred the surplus holdings to factory 'C' for normal use, the purchases made since 1970 of 44.5 tonnes of the material at a cost of about Rs. 51 lakhs could have been avoided.

23. **Defective ammunition**

Prior to 1974, an ammunition produced in factory 'A' since 1964 was issued to the Director of Ordnance Services (DOS) in package 'X' (wood). From 1974, package 'Y' (steel) designed by the Chief Inspector of Armament (CIA) and produced in factory 'B' was used (after inspection) as an alternative to package 'X' due to shortage of timber and its longer shelf-life, better protection of the ammunition, effective recycling/reutilisation as well as its fitness for air drop. In 1975, factory 'C' also took up manufacture of the ammunition and its supply in package 'Y'. Till March 1980, the two factories supplied 7.13 lakh numbers of the ammunition in package 'Y'.

One of the user units noticed (August 1977) during inspection of a consignment received from an ordnance depot that the ammunition was defective due to separation of lid from the body. Therefore, in January 1978, the DOS ordered 100 per cent inspection of the stock of the ammunition (manufactured during 1974 to 1976) in various units and segregation of the defective ammunition for repair or replacement by the Director General of Ordnance Factories (DGOF). The DGOF stated (February 1978) that the defect was not due to manufacturing lapses, but could be due to severe jolting and inadequate care taken by the users while removing the ammunition from the package. Factory 'A' added (July 1978) that the main reason for the separation of the lid was the defective design of package 'Y' and that no defect of the ammunition was reported when it was packed and issued in package 'X'. However, the Ministry directed the DGOF (July 1978) to organise a team in consultation with the Director General of Inspection (DGI) and DOS for undertaking repair of the defective ammunition. No such team had, however, been organised so far (October 1980).

The Research and Development Organisation (RDO) was asked (July 1978) by the Ministry to look into the design of package 'Y' and to modify it, if considered necessary. According to the Ministry (October 1980), the CIA having already undertaken modification of package 'Y', no investigation by the RDO was carried out. Investigation by the DGI, however, revealed certain drawbacks in the welding technique and the DOS informed (October 1978) the DGOF that the defect was mainly due to incorrect welding of the body of the ammunition and that the defective package might also have contributed to this to some extent.

Factory 'C', however, repaired on trial basis 200 numbers of defective ammunition by July 1979 at a cost of Rs. 0.05 lakh, of which 196 were accepted in inspection. As the DGOF was not agreeable to undertake further repair work because it would affect regular production of the factories, it was decided by the Ministry (December 1979) that the repairs should be got done by the DOS in the depots under him with the assistance of the DGOF.

The Ministry stated (October 1980) that remedial measures had been taken to improve the welding technique and the package 'Y'.

As a result of defective welding of ammunition coupled with defects in package 'Y', 2.25 lakh numbers of ammunition (approximate cost : Rs. 3.04 crores) remained (June 1980) unusable. The actual cost of its rectification (which on the basis of estimated repair cost in factory 'C' would work out to Rs. 52.4 lakhs) would be known only on completion of repair. Only 4,258 numbers were, however, repaired till July 1980.

24. Non-accounting of receipts of stores

Rules regarding accounting of stores received in the ordnance factories from sister ordnance factories provide that :

— all stores should be inspected on receipt within 14 days and taken on charge without delay;

— in case the stores are not found acceptable on inspection, discrepancy reports are to be sent to the consignor factories within one month of their receipt for remarks; and

— if a reply on the discrepancy reports is not received from the consignor factories within one month or if they disclaim their responsibility for the discrepancy, the stores are to be brought to account as found on receipt and necessary loss statements prepared for regularisation.

It was noticed in audit that the above rules were not being followed and stores worth Rs. 58.76 crores remained unaccounted for at the end of the March 1979 in the store ledgers of various ordnance factories due to non-preparation of receipt vouchers for them; of those stores remaining outstanding for 5 years and above, 3 years and above but less than 5 years and 1 year and above but less than 3 years amounted to Rs. 1.03 crores, Rs. 2.10 crores and Rs. 6.04 crores respectively.

A test-check (April 1980) in audit in factory 'A' (established in 1970) disclosed that stores received from other factories since 1970-71 had remained unaccounted for and the total outstandings at the end of March 1979 amounted to Rs. 6.63 crores as detailed below :

	(in lakhs of rupees)
5 years and above	65.94
3 years and above but less than 5 years old	167.34
1 year and above but less than 3 years old	116.83
Less than 1 year old	313.05

In February 1978, factory 'A' informed the Director General, Ordnance Factories (DGOF) that the receipt vouchers for the stores (comprising mostly components for vehicles) could not be prepared as the supplying factories were continuing to supply defective components, but they were not accepting the discrepancy reports raised on them stating that the items were inspected by the consignors' inspectors before despatch. It was observed in audit that in most of the cases the discrepancy reports were not raised by factory 'A' within the prescribed period of one month. The DGOF constituted (September 1978) a technical committee to investigate the items covered under discrepancy reports raised by the factory till March 1978 on 3 supplying factories and to submit its report by 30th November 1978. The technical committee, which started functioning from October 1978, however, found that there were 9 other factories (besides 3 indicated by the DGOF), on which discrepancy reports had been raised by factory 'A'. The scope of the investigation by the committee was, therefore, extended (November 1978) to cover these 9 factories also. However, due to the transfer of the Chairman of the committee to another assignment, the committee confined its investigation to only 4 factories. The committee submitted an interim report in December 1978 and recommended, *inter alia*, that :

— all items accepted for utilisation by bilateral discussions between the consignee and the consignor factories and those accepted with selective assembly and rectifications by factory 'A' should be utilised on priority basis ; and

— the items which were to be rectified by the supplying factories should be urgently backloaded to them.

The committee also observed that there would be loss on account of components becoming unusable for current production due to unrectifiable defects, changes in design and rectification cost being beyond permissible limits; the Ministry of Defence stated (December 1980) that the committee had not indicated in its report the magnitude of the financial loss suffered on these counts.

In June 1979, factory 'A' was directed by the DGOF to take follow-up action on the report and to complete similar review by September 1979 in respect of the remaining factories adopting the methodology and criterion indicated by the committee. The review to be made by factory 'A' had, however, not been completed (September 1980). The Ordnance Factory Board stated (October 1980) that as the issue vouchers for stores supplied by the consignor factories were very old and the methodology indicated by the committee involved voluminous work, considerable time would be required to clear the outstandings.

Thus, the position at the end of November 1979 revealed that components worth Rs. 5.74 lakhs only could be taken by factory 'A' to stock out of a total value of Rs. 350.11 lakhs lying unaccounted for more than a year as on 31st March 1979. Stores worth Rs. 58.76 crores remained unaccounted for (31st March 1979) in various ordnance factories; out of these, stores worth Rs. 9.17 crores pertained to 1 year and above.

The Ministry stated (December 1980) that instructions had been issued to deal with the discrepant cases expeditiously and that remedial measures to eliminate recurrence of such incidents in future had been adopted.

CHAPTER 4

WORKS AND MILITARY ENGINEER SERVICES

25. Unintended benefits to a contractor

A Zonal Chief Engineer (CE) concluded (September 1971) a contract with a firm for provision of underground cables and street lighting at a station for Rs. 55.52 lakhs subject to a deviation up to a maximum of 10 per cent. The contract *inter alia*, stipulated that sufficient lengths of extra cable at every joint, terminal, ends of bus-bar/lamp fittings were to be provided, but no measurements of these cables were to be taken for the purpose of payment. However, measurements of such extra lengths of cable were also recorded in the measurement books and a sum of Rs. 1.07 lakhs was paid therefor to the contractor through running account bills.

As per Engineer-in-Chief (E-in-C)'s instructions of February 1966, adequate ground data were to be collected before going out for tender so that realistic estimate could be prepared. The site conditions were, however, not examined adequately at the time of preparation of estimate, with the result that there was reduction in the quantities of work in respect of several items. Consequently, the work was completed (December 1974) at a cost of Rs. 44.24 lakhs i.e. at 20.31 per cent short of the contract amount. As the deviation limit was in excess of 10 per cent stipulated in the contract, the contractor claimed (February 1975) extra payment of Rs. 4.42 lakhs (representing 10 per cent of the value of work done) as compensation. However, in March 1975, the contractor scaled down his claim on this account to Rs. 0.80 lakh as a measure of goodwill for immediate settlement. The department, however, did not accept the claim for compensation and after deducting Rs. 1.07 lakhs already overpaid on account of extra lengths of cable, passed (July 1976) the final bill for a minus amount of Rs. 0.08 lakh which was accepted by the contractor "under protest".

In December 1976, the contractor asked for arbitration on his claim for Rs. 5.32 lakhs which included (i) Rs. 3.11 lakhs on account of compensation for exceeding the deviation limit, (ii) Rs. 1.10 lakhs for extra lengths of cables supplied and (iii) Rs. 1.11 lakhs for other items. The arbitrator appointed (February 1977) by the E-in-C awarded (February 1979) Rs. 3.25 lakhs in favour of the contractor. The Ministry of Law whose advice was sought (March 1979) by the department, advised that there were no valid grounds for challenging the award for Rs. 2.35 lakhs in respect of items (i) and (ii) as the arbitrator had not given any reasons for his findings but suggested that the department might challenge the award for Rs. 0.90 lakh in respect of other items as the arbitrator had gone beyond the terms of the contract agreement as also the terms of reference.

The Zonal CE filed (10th August 1979) an application in the High Court to set aside the award. While the case had been partly heard, the department and the contractor arrived at a mutual agreement accepting the award to the extent of Rs. 2.35 lakhs in respect of items (i) and (ii) only. The High Court modified the award accordingly in December 1979 and the decretal amount of Rs. 2.35 lakhs was paid to the contractor in March 1980.

The Ministry of Defence stated (August 1980) that :

— during execution of the civil works, the actual alignment and siting of roads, poles and buildings underwent changes to meet the site conditions; as such the lay-out and quantities of electrical work also changed ;

— variation of 20 per cent on scheduled quantities was not uncommon to such type of works ; and

— Rs. 1.07 lakhs for certain cables were deducted from the final bill of the contractor, but the amount was included by the arbitrator in his award.

The case disclosed that :

— due to inadequate site examination there was 20.31 per cent deviation in the contract amount as against the stipulated 10 per cent leading to a payment of Rs. 1.28 lakhs to the contractor as compensation for work not done ; and

— extra lengths of cable laid by the contractor were measured and paid for in contravention of the terms of the contract, resulting in unintended benefit of Rs. 1.07 lakhs to the contractor.

26. Loss due to delay in revision of recovery rate of electricity

The supply of electricity to the Armed Forces as well as to certain other private consumers is arranged by the Military Engineer Services (MES) either from their generating installations or by bulk purchase from other sources (*e.g.* State Electricity Boards). In respect of such consumers, who are not entitled to free supply of electricity, charges for electricity consumed are recovered at all-India flat rates (at half the rates from the Service Officers in respect of electricity consumed for light and fans) fixed by the Government from time to time for different classes of consumption. These rates are determined with reference to the all-India average all-in-cost rates of generation/purchase and supply on "no profit no loss" basis. Government regulations provide that periodical reviews of these rates with reference to prevailing all-in-cost rates are to be carried out to determine whether the rates require any revision.

Mention was made in paragraph 16 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1970-71 about the delay in revising the all-India flat rates of recovery for electricity and consequent loss of revenue of Rs. 52 lakhs. These rates were last revised (July 1974) retrospectively as follows :

Class of consumption	Effective from 1st October 1973	Effective from 1st April 1974
	(Paise per unit)	
Class 'A' (illumination and ventilation)	42	44
Class 'B' (power purposes during all hours)	28	30
Class 'C' (power purposes during restricted hours)	19	21
Class 'D' (street lighting)	44	48

Government had also under consideration (from August 1973) the question of introduction of a "single tariff" system in place of the existing 'multi-tariff' system and this proposal had remained under protracted discussions amongst the Ministry of Defence, Ministry of Finance (Defence) and the Army Headquarters. Pending decision on the issue, the all-India flat rates of recovery fixed in July 1974 had not been revised despite progressive increases in the all-in-cost rates as indicated below :

Class of consumption	All-India flat rate	All-in-cost rate			
		1974-75	1975-76	1976-77	1977-78
			(Paise per unit)		
Class 'A' . .	44	46	51	55	59
Class 'B' . .	30	31	35	39	41
Class 'C' . .	21	22	25	28	29
Class 'D' . .	48	46	51	55	59

As a consequence of non-revision of rates so far (September 1980), Government had suffered a loss of Rs. 189.52 lakhs from 1974-75 to 1977-78 (being the difference between the recoveries made at the prevailing all-India flat rates and the actual all-in-cost rates). As the consolidated cost rates for the years 1978-79 and 1979-80 were yet (September 1980) to be compiled, the losses for these years could not be computed.

The Ministry of Defence stated (September 1980) that :

— no frequency had been laid down for the revision of the rates charged for electricity and the revision of the all-India flat rates was carried out periodically as and when the need for the same existed ;

— the proposal for further revision of the existing rates was under active consideration and a decision in this regard was likely to be taken shortly ; and

— due to considerable time taken by the various authorities in the preparation of annual installation returns and compilation of costing sheets by the E-in-C in order to arrive at the all-in-cost rates, it took in all about 2—3 years for the revised rates to be made effective.

Although the all-in-cost rates for electricity from the year 1974-75 onwards were generally higher than the all-India flat rates, the latter rates were yet (September 1980) to be revised even after a lapse of 6 years, thereby resulting in a loss of Rs. 189.52 lakhs for the years 1974-75 to 1977-78.

27. Construction of an auditorium

In April 1970 the Ministry of Defence accorded administrative approval to a project for construction of an auditorium for 1500 cadets, officers' mess and a stadium for a training institution at an estimated cost of Rs. 27.46 lakhs (subsequently revised to Rs. 40.14 lakhs). The target date of completion of the project was indicated as 31st March 1972 and the benefits were likely to commence from 1972-73 onwards. For the construction of the auditorium (estimated cost: Rs. 17.90 lakhs) and the stadium (estimated cost: Rs. 13.60 lakhs) a Zonal Chief Engineer (Zonal CE) concluded (May 1972) a lump sum contract with a public sector undertaking (undertaking) for Rs. 38.52 lakhs. The undertaking, however, engaged another private firm 'Y' for construction work without prior written approval of the accepting officer, although it was required to do so under the conditions of the contract. The work was transferred (May 1972) to another Zonal CE for execution. The work was commenced on 20th June 1972 and was to be completed within 2 years. It could not, however, be completed by the target date (19th June 1974) due to financial stringency.

The roof overpart consisted of 11 prestressed concrete beams (marked RB-1 to RB-11) out of which 6 numbers had been completed. While concreting work was being done, on 5th February 1976 one of the beams (RB-11) collapsed resulting in the death of 9 persons and injury to 60 others. The cost of damage to this beam including roof slab as a result of the accident was assessed at Rs. 0.98 lakh. To find out the probable cause of the accident and to pin-point negligence, Government appointed a Commission of Inquiry which finalised its report on 31st July 1976 and held that :

— design of the beam did not satisfy the Indian Standard Code requirements ;

— design had not been vetted by a competent and specialist design organisation with requisite expertise and experience ;

— timber shuttering and scaffolding were used (with the prior approval of the Zonal CE) in place of steel shuttering as enough steel scaffolding was not available ; and

— centering and shuttering that were erected as early as September 1975, were exposed to weather for several months.

The Commission, thus, held one Zonal CE responosible for not getting the design vetted by a specialised organisation and another Zonal CE for substitution of timber shuttering and centering in place of tubular scaffolding.

After the accident, a number of defects, *viz.* non-provision of grouting for prestressed beams, damage to brick work and balcony side-walls, etc., were noticed by the Military Engineer

Services (MES) and pointed out (July—August 1976) to the undertaking for rectification. On 26th March 1977 the undertaking stated that since the design of the auditorium was being revised, it would not undertake the job unless the rates were revised. The MES did not agree (April 1977) to revision of rates, but requested the undertaking to take up the case with the Ministry of Defence for *ex-gratia* payment and to resume work at the existing rates and complete it by June 1977. The undertaking did not resume work and consequently the contract was cancelled by the Zonal CE on 12th July 1977. By that time the undertaking had been paid Rs. 13.59 lakhs for completion of 84.5 per cent of work against the contract. However, on 12th September 1977, the undertaking offered, *inter alia,* to execute the work on cost plus basis, but the offer was rejected (29th September 1977) by the MES as it was received late and was conditional.

Meanwhile, another beam (RB-5) (estimated cost: Rs. 1.02 lakhs) also collapsed on 7th August 1977 damaging the balcony and some of the form (shuttering) and reinforcement work. The undertaking was informed on 8th August 1977 that in view of its failure to take remedial measures to safeguard the structural stability, all expenses incurred towards safety measures would be debited to its account. In December 1977, a fresh contract was concluded with contractor 'A' to complete a part of the remaining work consisting of RCC/prestressed concrete at a cost of Rs. 11.89 lakhs. In March 1978, the undertaking was informed about getting the balance work completed at its risk and cost. The balance work, which was commenced on 16th January 1978, was to be completed by 15th July 1978.

In accordance with the decision taken by engineers and two different specialist firms 'B' and 'C' engaged for consultation by the MES and contractor 'A', the cables in already cast beams (RB-1 and RB-2) were to be changed to a value (at a particular limit) given by specialist firm 'B'. While the work was in progress, firm 'C' advised (October 1978) scrapping of the already cast beams (RB-1 and RB-2) as these 2 were not safe on account of considerable honey-combing and cracks noticed therein. After further consideration, it was decided (July 1979) that these two beams (costing over Rs. 1.50 lakhs) be dismantled and new beams cast in their place. The work on dismantling and reconstruction of these beams was ordered (September 1979) at a cost of Rs. 6.34 lakhs through an amendment (April 1980) to the contract concluded with contractor 'A' and the same had since been completed (around June 1980). In spite of the rehabilitation measures adopted on the advice of specialist firms 'B' and 'C', the stability of the other 2 beams (RB-3 and RB-4) which were also cast by the undertaking, had deteriorated further due to excessive sagging and cracks. On the advice of firm 'B', it was decided (July 1980) by the MES to dismantle and provide new beams at an estimated cost of Rs. 7.50 lakhs. In the meantime, the MES had already spent Rs. 0.30 lakh in rehabilitation of these beams A sum of Rs. 18.60 lakhs had been paid (August 1980) to contractor 'A' as running payments and Rs. 0.60 lakh to firm 'B'.

Four subsidiary contracts (value: Rs. 15.84 lakhs) were also concluded by the MES during 1975—1978, but work amounting to Rs. 1.27 lakhs against one of the contracts had only been completed (October 1980) as the site was not yet ready due to delay in completion of the balance structural works entrusted to contractor 'A'. This was expected to be completed by December 1980 and the balance work against the 3 subsidiary contracts by December 1981.

The Ministry of Defence, while accepting the facts, stated (October 1980) that :

— in accordance with the general practice followed for building contracts, the design and specifications of temporary auxiliary works were left to the discretion of the contractor ;

— due to inadequate resources of the undertaking, the decision to change the specification of shuttering and scaffolding from steel to timber was taken by the accepting officer presumably to expedite completion of already delayed work ;

— keeping in view the qualifications of the officer who designed the structure, the Zonal CE did not think it appropriate to get the design re-checked by any outside agency ;

— instructions had been issued (June 1976) regarding importance of checking the design of form work highlighting the salient points to be checked during the supervision ;

— instructions had been issued (July 1977) regarding importance of liaison between the designers and executives and keeping designers briefed on the modifications at site ;

— procedure had been evolved (August 1977) for entering into agreements for specialist consultancy services ; and

— the extra cost due to cancellation of contract with the undertaking and conclusion of a fresh contract at its risk and cost would be determined after completion of balance work.

Thus, due primarily to basic design defects, change of shuttering and scaffolding from steel to timber and defective execution of the work, the construction of the auditorium sanctioned in April 1970 and on which Rs. 32.49 lakhs had already been spent, was yet to be completed (October 1980). Besides the extra cost involved (yet to be determined), delay in the construction of auditorium adversely affected the training programme of the institution.

28. Avoidable extra expenditure on procurement of bitumen

In order to save foreign exchange on import of steel sheets for the manufacture of packing drums, the Ministry of Petroleum and Chemicals evolved (September 1972) a new procedure of distribution of bitumen from 'packed' to 'bulk' supply in areas within a radius of 250 kms. (from 4 refinery supply points) from 1st April 1973 to be extended in a phased manner to 300 kms. from 1st September 1973 and 350 kms. from 1st April 1974. This decision was circulated in January 1973 by the Army Headquarters (Engineer-in-Chief's Branch) to the lower Military Engineer Service (MES) formations with the stipulation that it should be specified in future tenders that the contractors would produce original stamped receipts from the manufacturers in support of the quantity of bitumen procured in bulk and that the contractors would buy their requirements directly from the manufacturers.

A Zonal Chief Engineer (CE) located at station 'Y' where a refinery supply point of bitumen was available concluded (October 1979) a contract for the work of extension and repairs of a runway at a nearby Air Force Station, which stipulated departmental issue of bitumen to the contactor. The Zonal CE had placed in September 1979 (amended in November 1979) an order for supply of 1300 tonnes of grade 'A' and 200 tonnes of grade 'B' bitumen packed in drums at the same rate of Rs. 1,621.56 per tonne in the Director General, Supplies and Disposals rate contract of June 1976 when the bulk supply rate was cheaper by Rs. 309 per tonne up to a distance of 300 kms. An earlier contract (for station 'Z') concluded in 1978-79 by the same Zonal CE had, however, stipulated bulk procurement of bitumen by the contractor himself.

The Ministry of Defence stated (August 1980) that as per guidelines issued by the E-in-C in November 1978, it was intended to issue bitumen departmentally to ensure quality and easy availability and that as the department did not have necessary arrangements like bitumen carrier, storage arrangement and distribution arrangement, it was decided to procure bitumen departmentally in drums and not in bulk.

The fact remains that had the contract of October 1979 also provided for procurement of bitumen in bulk by the contractor, extra expenditure of Rs. 4.63 lakhs could have been avoided.

CHAPTER 5

PROCUREMENT OF STORES AND EQUIPMENT

29. Procurement of defective ammunition

The following two cases of procurement of defective ammunition (cost : Rs. 93.78 lakhs) from abroad were noticed in audit :

Case 'A'

In March 1971, the Ministry of Defence concluded a contract with a foreign manufacturer firm 'X' for supply of 60,000 numbers of an ammunition at a unit price (f.o.b.) of US $ 19 (total cost : US $ 1,140,000 or Rs. 85.50 lakhs). The contract stipulated, *inter alia,* the following conditions :

(a) Payment in full would be made in foreign exchange within 30 days from the date of receipt of the firm's notification of readiness of supplies for shipment.

(b) The stores were to be inspected by the firm's own inspection organisation; a representative of the Ministry of Defence, if desired by the purchaser, might be associated during testing and inspection as observer, who would not be responsible for the quality of inspection and acceptance of materials.

(c) If the ammunition was found and proved defective in design, material or workmanship within the warranty period of 5 years from the date of its delivery, the firm would replace it free of cost with utmost expedition; the acceptance of defect was to be notified by the firm within 30 days of the receipt of its intimation from the Ministry.

The ammunition was received in two consignments of 20,000 and 40,000 numbers in January and May 1972 respectively for which full payment (Rs. 85.54 lakhs) was made during October 1971—March 1972.

Out of the first consignment of 20,000 numbers (4 lots), 4,980 numbers failed in both check-proof and reproof tests (May 1972) and were accordingly rejected by the Director General of Inspection (DGI). Out of the second consignment of 40,000 numbers (5 lots), 35,000 numbers (4 lots) failed in check-proof test (October 1972).

The DGI advised (February/May 1973) the Ministry to take up the matter with the foreign firm for replacement of the rejected quantity (39,980 numbers). The Legal Adviser (Defence) who was consulted, observed (July 1973) that since the organisation of the DGI was not in a position to say precisely whether the defects found in the ammunition were due to defective design or material or workmanship and that since they could only say that the ammunition supplied by the firm did not conform to the prescribed specifications, the warranty clause was not attracted and it would not be advisable to claim replacement of the defective ammunition from firm 'X' under this clause. He, however, advised that under another clause 10 of the contract which stipulated that the licensee could insist on supplies being strictly according to specifications, the question of replacement of supplies not conforming to specifications could be taken up with firm 'X'. The matter was accordingly referred by the Ministry to firm 'X' in July 1973.

In February 1974, the DGI informed the Ministry that 15.020 numbers of ammunition of the first consignment which were earlier cleared (May 1972) in check-proof test, had failed in further tests carried out in April and July 1973. In July 1974, the Army Headquarters (Army HQ) instructed the concerned holding depots not to make any issues from stock (pertaining to the first consignment) and to withdraw the quantities already issued.

The Ministry of Law, which was consulted, stated (March 1974) that an attempt be made for an amicable settlement of the issue with firm 'X' to avoid delay and expenses of arbitration proceedings. After protracted correspondence, the representative of firm 'X', who came to India, indicated (21st June 1976) that it would not be possible for firm 'X' to replace the defective ammunition. He, however, agreed that the defective ammunition would be 'reworked' in India to make it serviceable for which a detailed proposal would be furnished to the Ministry by July 1976. He also agreed that initially 200 numbers would be 'reworked' by firm's own technicians as an experimental measure before taking up reworking of the ammunition in bulk. The reworking of the trial batch of 200 numbers was carried out by firm 'X' in March 1977. The repaired samples were found to meet all the requirements except the test for water-tightness and it was decided (April 1978) that the ammunition after reworking would be accepted with relaxed specification regarding water-tightness.

There was, however, no further progress on the reworking of the defective ammunition and in November 1979 firm 'X' appointed a consultant for settlement of the case, who proposed (December 1979) the following three alternatives :

(i) repair of defective ammunition within 6 to 9 months with warranty from the date of acceptance, or

(ii) direct cash payment to the Ministry, or

(iii) to submit to arbitration as desired by the Ministry in case the above two proposals were not acceptable.

The offer of firm 'X' for $ 100,000 (about Rs. 8 lakhs) as cash settlement was considered by the Ministry of Defence in consultation with the Ministry of Finance (Defence), but it was decided (January 1980) to claim from firm 'X' Rs. 78.11 lakhs towards the cost of defective ammunition plus liquidated damages of Rs. 3.98 lakhs and also to levy interest at the rate of 18 per cent on Rs. 78.11 lakhs.

The Ministry of Defence stated (July 1980) that firm 'X' again offered to carry out repairs of the ammunition, but that it was decided to go in for arbitration as advised by the Ministry of Law.

Thus, 53,074 numbers of defective ammunition (value : Rs. 75.63 lakhs) were held in stock (July 1980) for over 8 years without any prospects of their repair/utilisation.

Case 'B'

In November 1971, the Ministry of Defence concluded a contract with a foreign supplier 'Y' for the supply of 22,000 rounds of a particular type of ammunition at a total (f.o.b.) cost of Rs. 22 lakhs for delivery by December 1971.

The contract envisaged final inspection by the authorised inspection organisation of the Army of the country of origin with the stipulation that the purchaser reserved the right of replacement of defective ammunition free of charge, if any defect was notified within 160 days of its receipt in India. Besides, there was also performance guarantee for 5 years from the date of bill of lading for free replacement in India for any defective ammunition or component thereof provided the same had been handled and stored as per prescribed instructions.

The ammunition packed in 5 lots was despatched in one consignment in December 1971. On receipt (January 1972), it was subjected to check-proof inspection by the Inspection Directorate during May—June 1972 and found satisfactory. It was accordingly released (July 1972) for issue with ambient temperature restriction of 40°C. Issues of the ammunition were made to user units from February 1973 onwards.

The user units, after firing the ammunition on different occasions, reported (December 1974—November 1975) the defect of splitting/cracking of cartridge cases. On receipt of the defect report from the Inspection Directorate in March 1976, the Ministry took up the matter with supplier 'Y'. The supplier's representative in India intimated (May 1976) that his experts would come to India to solve the problem. The supplier's team of experts visited India and trial firing of samples from all the 5 lots was carried out during October-November 1976 in their presence when 3 out of 5 lots exhibited 'cracking'. In June 1977, sample inspection of all the 5 lots was carried out in an ammunition depot in the presence of the representative of the supplier and the Inspection Directorate and it was confirmed that the ammunition was unfit for use.

In September 1977, the Ministry requested supplier 'Y' to take back the entire defective ammunition at the original contract price. In October 1978, supplier 'Y' indicated that most of the rounds of ammunition bore tool marks on their cases and were not actually found cracked during the last inspection, that the defective rounds be inspected on his behalf and reasonable cost of inspection debited to him and that payment would be made in full for any cartridge cases which would be found actually cracked.

On 100 per cent inspection of the segregated stock of ammunition (15,666 rounds; cost : Rs. 15.67 lakhs) the entire quantity was declared defective and full replacement thereof or refund of the total cost of defective quantity claimed (February 1979) from supplier 'Y'. However, supplier 'Y' stated (12th March 1979) that according to his assessment there was no danger to the weapon or crew and that the ammunition could be used for good purposes and hence requested that the total quantity of the ammunition be accepted at a small discount. However, further trials were conducted in July 1980 with samples drawn from all the 5 lots in the presence of supplier's representatives ; final decision in the matter was awaited (October 1980).

The Ministry of Defence stated (November 1980) that :

— no defect of cracking was observed at the time of check-proof firing carried out during May—June 1972; and

— efforts for replacement of the defective ammunition or obtaining compensation therefor were being made.

The following points emerge from the above :

- while the ammunition was initially cleared (May-June 1972) in check-proof inspection, it was found defective within a short period of its issues to user units;
- 15,666 rounds of ammunition (valued at Rs. 15.67 lakhs) were held in stock (November 1980) as defective for over 8 years; and
- claim for their replacement or refund of the value thereof preferred on supplier 'Y' within the warranty period had not been settled so far (October 1980).

30. **Procurement of defective equipment from abroad**

In paragraph 8 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1975-76, mention was, inter alia, made about procurement of 14 units of an equipment 'Y' to meet urgent requirements of the Army and Air Force, 6 of which were covered through a contract (value : $ 2.776 million) concluded with a foreign firm 'B' in September 1976. The amount of the contract was enhanced (January 1979) to US $ 2.944 million on account of requirement for additional spares for the equipment. The equipment was scheduled for delivery within 10—12 months from the date of signing the contract.

The contract contained a warranty clause valid for one year from the date of installation of the equipment or 15 months from the date of shipment, whichever was earlier. In the event of delay in delivery for over 1 month, liquidated damages were leviable at the rate of 0.7 per cent per month for the supplies delayed up to a maximum of 4 per cent of the contracted value of the supplies.

The equipment (6 units) was delivered by the firm during March—May 1978, i.e. after a delay of about 6—8 months. This attracted liquidated damages of $105,076 as per the terms of the contract. The firm countered (May 1978) that it was willing to accept liquidated damages to the extent of $40,000 only since the delay in delivery was largely due to delay on the part of the purchaser in carrying out acceptance inspection of the equipment. It was, however, decided to reduce the amount of liquidated damages to $60,000 as an acceptable compromise.

The equipment was shipped by sea in 43 packages of which only 42 packages were received by an Embarkation Headquarters during October—December 1978. In respect of one package shortlanded, a claim for Rs. 13.59 lakhs was preferred against the shipping agent in March 1979. As regards items found short/damaged in certain packages at the time of marine survey (October 1978), another claim for Rs. 3.37 lakhs was raised against the shipping agent in June 1979.

The stores (42 packages) were received in a Central Ordnance Depot (COD) during November 1978—February 1979. The claim for transit damages (assessed at Rs. 0.37 lakh) was raised by the COD against the railway authorities in April—November 1979.

During inspection of stores on receipt (February—March 1979) by a Board of Officers in the presence of the firm's representative, some more deficiencies of spares etc. were noticed. The Board found that all the 6 units had defects which the firm undertook to rectify. The firm's engineers were able to repair 2 units, which were issued to the Army user unit with limitations/defects. These 2 units issued to the user in May 1980 were yet (November 1980) to be made functional. The remaining 4 units were not found fit for operation and were in need of major rectification.

The warranty period having already expired in November 1979—February 1980, the firm took the view that it had no more contractual obligations in this regard. The Army Headquarters, therefore, requested (May 1980) the Ministry of Defence to either explore the possibility of persuading the firm to undertake repair of the equipment and to make it functional within a definite time-frame or to examine the feasibility of getting the equipment repaired through a public sector undertaking (entrusted with indigenous manufacture of similar equipment).

Additional test equipment (estimated cost : Rs. 18.36 lakhs) was ordered (October 1979) by the Army Headquarters from abroad for unit/depot repair of the main equipment. Some of the test equipment were yet (November 1980) to be received.

Eighteen generators of 18.75 KW capacity each (total value : Rs. 11.79 lakhs) required for 6 units of this equipment were issued by the COD to the user during August 1978—April 1979 even before the issue of the main equipment. Some of these generators were used sparingly for carrying out testing and repair of the equipment in the COD and subsequently for operation of 2 units of the equipment (non-functional) issued to the user unit.

The Ministry of Defence stated (November 1980) that the matter concerning the repair of the defective equipment was actively being pursued with the firm and that a supplementary agreement for this purpose was under negotiation.

The case, thus, revealed the following :

— 6 units of the equipment (total cost : over Rs. 2 crores) procured from abroad and received (in India) during October—December 1978 were found to have defects; 2 units repaired by firm's engineers were issued to the user with limitations/defects and were yet (November 1980) to be made functional. The remaining 4 units were not found fit for operation and required major rectification.

— Claims for shortages/damages (assessed at Rs. 17.33 lakhs) against the shipping agent and railway authorities were pending settlement.

— 18 generators (cost : Rs. 11.79 lakhs) issued during October 1978—April 1979 were lying with the user without being put to much use due to defects in the main equipment.

31. Procurement of defective stores

Lamp Siege Oil Burning (for use by Artillery units) was being manufactured and supplied by an ordnance factory under the orders of Director General, Ordnance Factories (DGOF). Against indents for 614 and 2,100 numbers of this item placed by a Central Ordnance Depot (COD) during March 1963 and April 1968 respectively, the DGOF expressed (March 1969) inability to arrange its manufacture and supply due to lack of capacity in the ordnance factories. In 1971, the factory manufactured 9 numbers of the item and supplied (August 1974) them (cost : Rs. 79.68 each) to the COD.

Meanwhile, under advice of the Army Headquarters (HQ), the COD projected (August 1972) a demand for 1,725 numbers (reduced to 1,565 numbers in February 1973) to Department of Defence Supplies (DDS). On the basis of a single quotation received by the DDS on a tender enquiry, a supply order was placed (March 1973) on a firm for the supply of 1,565 numbers of the item at the rate of Rs. 240 each (total cost : Rs. 3.75 lakhs). On receipt of a copy of the supply order, the COD pointed out (May 1973) to the Army HQ the exorbitant price of the item at which it was to be procured. Thereafter, on a further scrutiny of the detailed break-up furnished by the firm and negotiation of the price, the DDS issued (July 1975) an amendment to the supply order reducing the price to Rs. 90 each and increasing the quantity to 2,250 numbers (total cost : Rs. 2.03 lakhs) against the revised demand of May 1975. After inspection by the local inspector, the firm actually supplied 2,261 numbers in 7 lots during February—June 1976 and Rs. 1.88 lakhs were paid to the firm in May—June 1976 towards 95 per cent of the cost of stores.

During inspection by a Board of Officers (June 1976), the stores were rejected being defective and of sub-standard quality. At the instance of the COD, the stores were re-inspected (30th June 1976) by the Chief Inspector (CI) attached to the COD, who also found the stores as unacceptable. The COD, therefore, approached (July 1976) the DDS to get the stores replaced by the firm. The decision about the unacceptability of the stores was also intimated (July 1976) by the COD to the firm simultaneously.

A Board of Officers, convened by the Director General of Inspection (DGI) for re-inspection of the stores, found (August 1976) 470 numbers as acceptable with a certain amount of price reduction, 1,095 numbers repairable, 34 numbers erroneously issued but called back and rejected 662 numbers. Since the item was not considered fit by the COD to meet the functional and qualitative requirements of the Ordnance service of the Army, 470 numbers earlier considered by the Board of officers as acceptable were later declared (December 1976) unacceptable by them and the matter was referred (December 1976) to the Army HQ for decision.

In December 1976, the Army HQ instructed the COD to permit the firm to carry out the requisite repairs to the item in batches; 1,757 numbers were returned to the firm in March 1977 within the warranty period of one year. Five samples drawn out of the rectified/repaired batch of 75 numbers and accepted by the local inspector, were received by the CI attached to the COD in April 1978 for final inspection. A joint inspection was carried out (21st June 1978) by the CI and representative of the COD, who found even the rectified samples unacceptable. The CI intimated (November 1978) the DGI that the firm was not willing to carry out any further rectification on the lines suggested by the CI and added that the firm sought the finalisation of repair cost after completion of repairs/rectification.

In the meantime, the DGI ordered (October 1978) a Court of Inquiry to investigate the circumstances under which the defective stores were received and accepted by the local inspector.

The proceedings of the Court of Inquiry held in November 1978 and received by the Army HQ in April 1979 were yet (October 1980) to be finalised.

The Ministry of Defence, while accepting the facts, stated (October 1980) that :

— action on the proceedings of the Court of Inquiry was under finalisation; and

— legal action in terms of warranty clause of the supply order, to recover the amount from the firm was being taken in consultation with the Ministry of Law.

Thus, defective stores (cost : Rs. 2.03 lakhs) were procured for which the firm had already been paid Rs. 1.88 lakhs after inspection by a local inspector, which was obviously not adequate. These stores had been lying (October 1980) unutilised since their receipt (February—June 1976).

32. Increase in procurement cost of a simulator due to delay in release of foreign exchange

With a view to imparting training on an equipment, the Army Headquarters (Army HQ) proposed (April 1972) import of a simulator at an estimated cost of Rs. 19.90 lakhs (inclusive of freight charges amounting to Rs. 1.13 lakhs) based on a foreign firm's quotation received in 1971. The proposal envisaged that 25 per cent of the training could be imparted on the simulator and this would result in reduction of 10 numbers of the equipment (cost : about Rs. 165 lakhs).

While the proposal was under consideration on the basis of a fresh quotation obtained (March 1973) from the same firm, the cost of the simulator was estimated at Rs. 68.37 lakhs. In January 1974, the Army HQ assessed a saving of about Rs. 92 lakhs in capital outlay and Rs. 11.15 lakhs in the annual recurring expenditure and depreciation on induction of the simulator in training.

In May 1974, it was agreed in principle to acquire the simulator subject to the conditions that :

— ten numbers of the equipment would be surrendered by the Army ; and

— the Army HQ would find the necessary foreign exchange from its own allocation.

On receipt (May 1974) of a fresh quotation (CIF) of Rs. 74.38 lakhs (valid up to 31st August 1974), the Army HQ sought (June 1974) sanction for the purchase of the simulator, specifically bringing out that since the price had already escalated by Rs. 6 lakhs, any more delay would entail further escalation. Although the Army HQ confirmed (19th August 1974) that necessary foreign exchange could be made available from its allocation for 1974-75, the proposal was not cleared by the Ministry of Finance (Defence) within the validity period of the offer. The Ministry of Finance agreed (14th February 1975) to the release of foreign exchange of Rs. 80 lakhs as a special case. Meanwhile, the validity date of the offer having already expired, the firm enhanced (13th February 1975) the (CIF) price to Rs. 85.08 lakhs (valid up to 24th March 1975). After negotiations (which took into account the prevailing freight charges estimated at Rs. 1.43 lakhs), the firm ultimately agreed (May 1975) to supply the simulator at a (FOB) price of Rs. 79.96 lakhs and a contract was concluded accordingly in June 1975.

The contract, *inter alia,* provided for delivery of simulator within 20 months from the date of the contract, good seaworthy packing, pre-shipment inspection by the authorised inspector of the country of origin and right of the purchaser to witness the conducting of the seller's factory test. The firm intimated (November 1976) that due to force majeure circumstances, the delivery of the simulator was likely to be delayed by 4-6 weeks.

The simulator was despatched (May 1977) through an Indian shipping company. (Freight charges actually paid to the shipping company amounted to Rs. 1.56 lakhs.) There was, thus, a delay of 7 weeks (excluding the force majeure period) in delivery of the simulator for which liquidated damages amounting to Rs. 1.40 lakhs were leviable, but not recovered as the Ministry of Defence stated (March 1980) that no monetary loss was caused due to late arrival of the simulator.

The consignment, on receipt at the Indian port, was unloaded (July 1977) in the presence of representatives of the consignee and the firm. Thereafter, the simulator was despatched to the consignee unit where it was to be installed. On opening the packages (July 1977) at the site in the presence of representatives of the firm, it was found that sea water had seeped into 8 (out of 27) packages with the result that there was extensive rusting and corrosion. No marine survey had, however, been carried out at the time of unloading at the port. A Board of Officers held in July 1977 attributed the damages to rusting of sub-assemblies. On 19th September 1977, the Army HQ informed the Ministry that since no experts were present at the time of unpacking, it was not possible to make any assessment in regard to seaworthiness of the packing. Meanwhile, the firm reported (16th September 1977) to the Ministry that its representative had insisted on the presence of insurance inspectors on behalf of the Ministry to assess the damage caused to the simulator, but without any result. The firm added that the cost of repairs to the damaged simulator, assessed at Rs. 5.34 lakhs would be the responsibility of the Ministry.

In October 1977, the Legal Adviser to the Ministry pointed out that under the provisions of the contract the firm was required to provide seaworthy packing and unless it could be established that the packing was as per the contract, the Ministry should not accept any liability for repairs. On being approached again, the firm declined (November 1977) responsibility for the damages caused to the simulator for the reasons that :

- packing was done by specialists for sea shipment as under deck cargo ;

— there was no damage when the shipping agent accepted the packages ; and

— the fact of water pouring out from one of the packages was pointed out at the time of disembarkation.

The firm having declined responsibility for the damage and as it was not possible at that stage to establish that seaworthy packing had not been done by the firm, it was decided (November 1977) to accept the liability for £28,157 (Rs. 5.34 lakhs) being the cost of repairs to the simulator as assessed by the firm. After getting the simulator repaired through the firm it was installed in June 1978 and training on the simulator commenced from July 1978.

Although the number of recruits trained during July—December 1978 had come down considerably as compared to that during January—June 1978, neither the authorised number of the equipment had been reduced, nor was any reduction in its actual holding effected.

The Ministry of Defence stated (March 1980) that :

— the delay in the release of foreign exchange was due to tight foreign exchange position prevailing at that time ;

— at the time of unloading of the consignment at the port, no damage or presence of water in the packages was noticed and marine survey was, therefore, not contemplated (the firm's suggestion for presence of insurance inspectors was made only after the packages were unloaded/unpacked at the destination);

— even before the simulator was installed, the deficiency in the holding of the equipment was more than 10 numbers and consequently no reduction was made; however, action was in hand to reduce the authorised holding appropriately.

The following are the main points that emerge :

— the delay of three years in arriving at a final decision to procure the simulator resulted in escalation of the price from the estimated figure of Rs. 19.90 lakhs to Rs. 81.52 lakhs ;

— due to non-acceptance of the offer of Rs. 74.38 lakhs by 31st August 1974, the price finally paid including freight was Rs. 81.52 lakhs, thus, involving extra expenditure of Rs. 7.14 lakhs ;

— for want of assessment in regard to seaworthiness due to absence of an expert at the time of unpacking, Government could not fix responsibility for damages on the firm and had ultimately to bear the cost of repairs (Rs. 5.34 lakhs) to the simulator ; and

— inspite of deficiencies in the holding of the equipment before installation of the simulator, manpower authorised for the same was maintained at almost full complement.

CHAPTER 6

UTILISATION OF EQUIPMENT AND FACILITIES

33. Avoidable expenditure due to abandonment of a project

In January 1966, the Army Headquarters (HQ) sanctioned a project for the provision of domestic, administrative and technical accommodation for an infantry workshop company (unit 'A') at a station 'Z' at an estimated cost of Rs. 49.01 lakhs. The work, which was to be executed under the Emergency Works Procedure, was taken up for execution by troop labour in July 1966 and was to be completed by October 1970 in three phases.

In October 1967, when the physical progress of the project was nil and expenditure of Rs. 9.77 lakhs (besides liabilities to the extent of Rs. 15.99 lakhs) had been incurred on provisioning of stores, the Command HQ intimated the Corps HQ that there was a likelihood of de-induction of unit 'A' from station 'Z' and suggested that the project be suitably modified for accommodating unit 'D'. However, a firm decision to this effect was communicated by the Command HQ to the Corps HQ in December 1967 and the latter was simultaneously asked to appoint a Board of Officers to review the project in the light of actual requirements of accommodation for unit 'D' to avoid construction of surplus accommodation. In January 1968, the Command HQ directed the Corps HQ to continue construction on the project to obviate any disruption in the execution of the works as planned. As a result of review carried out (June 1968) by the Corps HQ, some storage and technical accommodation was found surplus, which was, however, intended to be fully utilised by locating additional components of other units alongwith unit 'D'. The Command HQ, however, suggested

(July 1968) that the requirements of accommodation might be reviewed at a suitable stage so as to ensure that no surplus accommodation was constructed. The project, thus, continued to be executed till March 1971 when a Board of Officers was convened to recommend the utilisation of the domestic accommodation already built and stores received but not utilised. The Board of Officers, held in May 1971, recommended *inter alia* that a transport company (unit 'B') be located at the station to utilise the domestic accommodation already constructed. Thereupon, the Zonal Chief Engineer suggested (September 1971) that the scope of the work be reduced keeping in view the extent of works already completed/proposed to be completed. In November 1971, the Corps HQ issued instructions for foreclosing the project after completing the partially completed work on fencing, garages, roads, etc. and for initiating a new work for a unit 'E' for making use of unutilised stores and equipment. The work was accordingly foreclosed, but by that time 55 per cent of the work had already been completed at a cost of Rs. 31.86 lakhs (June 1972).

In June 1974, the Corps HQ was informed that after foreclosure of the project, a fresh work be got sanctioned to provide deficient accommodation for a new unit 'C' to be inducted there. The matter remained under consideration and in August 1978, the Corps HQ directed the Divisional HQ to convene a fresh Board to recommend minimum essential works to make the existing accommodation suitable for unit 'C'. The Board was accordingly held in August 1978, but the Zonal Chief Engineer advised (September 1978) that the work for shifting of unit 'C' could only be sanctioned after the project for unit 'A' was first foreclosed by the Ministry of Defence. A fresh Board was accordingly convened (January 1979) under orders of the Divisional HQ to suggest utilisation of all the assets created and stores procured under the project. The Board proceedings recommending the use of constructed portion of works for unit 'C' were forwarded (October 1979) by the Divisional HQ to the higher authorities for decision which was yet to be taken (August 1980).

The Divisional HQ stated (April 1980) that in the absence of formal sanction from the Ministry of Defence for foreclosure of the project, no action could be taken for utilising the assets, etc.

The Ministry of Defence stated (August and November 1980) that :

- decision taken in October 1967 to de-induct unit 'A' was not communicated to the engineer authorities, as it was considered that assets so created could be usefully utilised by suitable alternative incoming units ;
- a part of domestic accommodation (cost: about Rs. 5.76 lakhs) had been in occupation of unit 'F' since June 1974 ;
- unutilised stores (cost: about Rs. 17.29 lakhs) were transferred to other jobs in the station during August 1969 to October 1980 and a further quantity of unutilised stores (cost: about Rs. 4.27 lakhs) was proposed to be transferred to other sanctioned jobs ; and
- balance of assets worth about Rs. 4.54 lakhs could not be utilised till another job was sanctioned for unit 'C'.

Thus, although de-induction of unit 'A' from station 'Z' was anticipated in October 1967, the project was continued and Rs. 31.86 lakhs spent thereon ; out of this, assets worth Rs. 4.54 lakhs had been lying unutilised since March 1971 and further, unutilised stores (cost: Rs. 4.27 lakhs) were still (November 1980) to be transferred to other sanctioned jobs at the station.

CHAPTER 7

ARMY

34. Loss due to mis-appropriation of batteries

Vehicle Sub-Depot (VSD) of a Central Ordnance Depot (COD) located at station 'X' is responsible for holding stocks of batteries for mechanical transport vehicles. Repairs to the damaged batteries are carried out in the VSD and irrepairable/ unserviceable batteries, after these have been categorised by the ordnance personnel of the COD as unserviceable are required to be sent to the Salvage Section of another Ordnance Depot situated at a distance of 12—14 kms. from the VSD.

On 15th June 1976, a senior store-keeper incharge of the Battery Stores Section of the VSD while carrying 101 unserviceable batteries in a service vehicle to the Salvage Section for depositing, unloaded the lot at a private battery shop. On information received from an employee of the COD, the shop was raided on the same day by the security officer of the COD with the help of the civil police. The entire lot of 101 unserviceable batteries was seized by the police and the shop-keeper and the store-keeper were arrested the next day (16th June 1976).

A special stock-taking carried out in respect of all the batteries held on charge of the Battery Stores Section of the VSD revealed (16th June 1976) surpluses and deficiencies of 293 and 11 batteries respectively. A departmental Court of Inquiry was, therefore, held in November 1976 to investigate the irregularities noticed during special stock-taking. The Court opined that the possibility of mis-appropriation in the disposal of unserviceable batteries during the past few years could not be ruled out. Thereafter, a Staff Court of Inquiry ordered by the Sub-Area Commander to investigate the case, *inter alia*, observed (July 1977) that :

— 2,829 unserviceable batteries charged off as issues to the Salvage Section during the same period were in fact not received by it ;

— 101 batteries recovered from the shop should not have been categorised as unserviceable in June 1976, keeping in view their date of manufacture ; and

— the store-keeper incharge of the Battery Stores wilfully disposed of 2,829 batteries costing Rs. 2.83 lakhs (at the rate of about Rs. 100 per battery) to his personal advantage by maintaining false accounts and was to be blamed entirely for the said loss.

The Sub-Area Commander, while agreeing with the findings and opinion of the Staff Court of Inquiry, directed/recommended (May 1978), *inter alia*, that :

— severe disciplinary action be taken against the store-keeper for mis-appropriating 2,829 unserviceable batteries ;

— Commandant of the COD should maintain a close liaison with the Civil Police, with whom the case had been registered to ensure early institution of criminal proceedings against the store-keeper ;

— case be handed over to the Central Bureau of Investigation for detailed investigation ;

— a departmental Board of Officers be ordered under the appropriate authority to review and streamline the working and accounting system and security checks with a view to effectively sealing all possible sources of loss by adopting remedial measures ; and

— the loss of Rs. 2.83 lakhs on account of 2,829 unserviceable batteries be written off.

The Army Headquarters were informed about the above recommendations in April 1979 and their orders were awaited (October 1980).

The Ministry of Defence stated (October 1980) that :

— no departmental action was initiated against the store-keeper as he was being tried by the civil court in respect of misappropriation of 101 batteries ;

— the case was not handed over to the Central Bureau of Investigation on the recommendations of the General Officer Commanding-in-Chief of the Command ; the loss of Rs. 2.83 lakhs was yet to be written off ; and

— a departmental Board of Officers was convened to suggest measures for blocking loop-holes/leakages.

The case revealed that :

— there was no supervisory check on the working of the store-keeper, as all the batteries received were categorised as unserviceable by him alone even though the same were required to be so categorised independently by personnel of the ordnance branch attached to the COD ;

— there was loss of Rs. 2.83 lakhs on account of 2,829 unserviceable batteries yet (October 1980) to be written off ; and

— neither had criminal proceedings been instituted in a Court of Law nor disciplinary action initiated (October 1980) against the store-keeper for the loss of 2,829 batteries, which was detected in July 1977.

35. Acquisition, holding and administration of defence lands and buildings in a Command

1. Defence lands required and reserved for Military purposes and under active occupation are to be managed by Military authorities. Lands reserved for specific Military purposes, but not under active occupation are required to be placed under the management of the Military Estates Officer (MEO) who functions under the Military Lands and Cantonments (MLC) Directorate (Defence Lands and Cantonments (DLC) Directorate from October 1977) of the Ministry of Defence.

2. A test-check in audit of the utilisation of defence lands in one command disclosed the following points :

Station 'A'

3.1 Lands measuring 1200 acres requisitioned in 1940 to meet the then defence requirements were acquired in 1947. The management of these lands was, however, entrusted to the concerned MEO (as required under the rules) only in November 1954, after a lapse of 7 years. Soon after, the MEO reported (July 1955) to the Command MLC authorities that approximately 3,500 persons had firmly settled on those sites, which had been allotted to the settlers by Military authorities on payment of rent on frontage basis (instead of on area basis) without any written agreement and that there was no record except an unauthenticated plan prepared in 1947 showing the areas occupied which differed considerably from the areas actually under occupation. In December 1955, the MEO further reported to the Command MLC authorities that eviction could be taken up on receipt of instructions and that survey of each holding would be necessary.

3.2 In 1958, the station was declared as a cantonment but the civil area was not handed over by the MEO to the Cantonment Board, pending demarcation of boundaries of the civil area. In October 1976 (18 years later) a notification was issued by the Central Government indicating an area of about 320 acres as 'civil area' in the Cantonment as the actual area proposed to be notified was under revision at various levels. In June 1978 the Cantonment Executive Officer (CEO) was reminded by the MEO for erection of boundary pillars around the notified civil area so as to enable him to transfer the management of the lands in the 'civil area' to the Cantonment Board. While erection of boundary pillars was still in progress, the Command DLC authorities directed (July 1979) the MEO to complete the land register before handing over the area and also to furnish details of land held by private individuals to enable recovery of rent (including arrears). Management of the notified area was yet (June 1980) to be handed over to the Cantonment Board, pending completion of General Land Register (GLR). Arrears of rent (up to end of December 1979) on area basis in respect of the area under irregular occupation (8 acres) worked out to Rs. 2.43 lakhs as against Rs. 0.21 lakh on frontage basis and these were yet (June 1980) to be recovered. According to the MEO (June 1980), the cost of land under irregular occupation worked out to Rs. 20.22 lakhs.

3.3 The Ministry of Defence stated (June 1980) that :

— it was difficult to specifically pin-point reasons for the delay in handing over the land to the MEO till 1954 ; and

— preparation of GLR was completed in draft manuscript form and its finalisation was being expedited under a time-bound schedule.

4. *Agricultural leases*

In the same station, in accordance with Government policy, the MEO leased out lands declared to be temporarily surplus to Defence requirements for cultivation purposes under "Grow More Food Scheme". It was noticed in audit that rentals of Rs. 2.92 lakhs (1953-54 to March 1980) were outstanding (October 1980) on this account.

The Ministry of Defence stated (June 1980) that the MEO revised the rentals of agricultural lands from April 1971 in accordance with the Government policy and that the increase in rent was resisted by the lessees who obtained stay orders from Court.

Station 'B'

5. *Continued control by the Military authorities of lands remaining unoccupied and unutilised*

Case I

5.1 In February 1978, the local MEO informed the Command MLC authorities that 219 acres of land acquired during 1937-38 for a rifle range at the station had not been utilised (October 1980) since 1948 for the purpose for which it was acquired.

The Ministry of Defence stated (June 1980) that the land was used for various training purposes as required by the units at the station.

The following interesting points came to notice in audit :

- Even though as early as 1948, the local Collector had suggested that the land be restored to the ex-owners as it was no longer required and was being leased out for grazing, no such action was taken.
- On review of the case in 1957, it was found that the utilisation of land in question for a firing range would entail acquisition of additional land; considering the heavy compensation that might have to be paid for acquisition of additional land, the matter was not pursued.
- In July 1958, it was found that the cost of acquisition of additional land for use as firing range would be Rs. 10 lakhs. The matter remained undecided and the land continued to remain unutilised (August 1979).
- Consequent on re-examination of the necessity for ranges at the same station 'B', land measuring 274 acres (54 acres of state Government land and 220 acres private land) was requisitioned and possession taken over by the Defence authorities in June 1963.

The private land was, however, de-requisitioned in May 1971 as requirements for the ranges at station 'B' were stated to have been already met. This resulted in infructuous expenditure of Rs. 3.16 lakhs (recurring compensation of Rs. 1.91 lakhs paid for private land; hire charges to State Government : Rs. 0.46 lakh; expenditure on civil works for the range : Rs. 0.79 lakh).

Case II

5.2 76.65 acres of land acquired in 1940 for Military purposes was held in another location at Station 'B'. In January 1969, the Area Headquarters (HQ) informed the Command HQ that on joint inspection, it was found that the land had not been used for over 20 years and might be reclassified and put under the management of the MEO for leasing out. It was transferred to the management of the MEO in March 1971. In August 1971, the local Military authorities informed the MEO that since the land would be needed by them, it should not be leased out; this was reiterated in May 1972. The land was neither in use, nor was it leased out till March 1977 when 10 acres were given to an ex-serviceman for 5 years on payment of Rs. 250 per annum. The balance land of about 66 acres (value : Rs. 0.66 lakh) continued to remain (June 1980) as temporarily surplus.

The Ministry of Defence stated (June 1980) that the Army HQ were being requested to review the position and to put up a proposal for declaring the land permanently surplus, if the same was not likely to be made use of. The Ministry confirmed later (November 1980) that the land had been declared permanently surplus.

Station 'C'

6. *Acquisition of a building*

An area of 12.65 acres of land alongwith a building at station 'C' was requisitioned in October-November 1963.

Sanction of the Ministry for acquisition of land as well as the building at an estimated cost of Rs. 0.98 lakh was accorded in November 1968. The Collector was requested (November 1968) to acquire the property. Form 'J' notice for the purpose could, however, be served only 16 months later (March 1970). 'On account' payment of Rs. 0.79 lakh representing 80 per cent was made in March 1970 and the precincts stood formally acquired. The land was stated to have been acquired for the purpose of building a swimming pool for a training establishment. Against value of Rs. 5.27 lakhs plus 4 per cent interest from the date of acquisition determined (March 1971) by the Collector and sanctioned (January 1972) by the Ministry, the cost of the property was determined (April 1976) at Rs. 7.15 lakhs (including interest) by the High Court.

The land acquired was found (April 1971) by the Military authorities to be not suitable for the purpose of construction of a swimming pool and consequently, an alternative site out of Defence lands was selected for the purpose by the Engineers. Thus, the land acquired (cost: Rs. 7.15 lakhs) was not used for the purpose for which it was intended.

7. *Loss due to payment of higher rentals*

At station 'C' 75 houses (built by an Armed Forces Officers' Co-operative Housing Society) were hired for the Defence Services Officers from March 1973 onwards on monthly rent. As per the Government orders of June 1972 reasonableness of rents fixed for hired buildings was to be verified by the MEO. However, the Station Commander fixed the rents for hired houses as assessed by the State Public Works Department (PWD) authorities without consulting the MEO regarding their reasonableness.

On a complaint to the Ministry of Defence that the rentals paid (as assessed by the local State PWD authorities) were much higher than the rentals for similar accommodation in comparable localities nearby, the MEO addressed (December 1975) the owners to agree to a reduction of 10 per cent in the rents with effect from 1st January 1976. In 64 out of 75 houses hired during 1973—75, the owners agreed to the reduction. In other cases no further action was taken.

A Board of officers set up for the purpose suggested (September—December 1977) reduction in rents, which, however, could not be enforced as there was no condition in the agreements for reassessment of rent. In April 1978, the Station HQ asked the Board to reassess the rents adopting uniform yardstick of 38 to 40 paise per sq. ft. The rents were accordingly reassessed by the Board (May 1978) and majority of the house owners accepted the revised rents. The MEO, however, continued to pay rents at the old (higher) rates on the plea that the Station Commander had convened another Board to reassess rents in accordance with the latest Government orders (of September 1978) which would result in increased rentals and sought instructions from the Command DLC authorities whether reduction in rental should be held in abeyance. Although the MEO was informed (May 1979) by the Command DLC authorities that convening of the Board was not connected with hiring of houses, no action was taken to reduce rents (September 1979). Consequently, payment of rents at higher rates (than those assessed by the Board) up to September 1979 resulted in extra expenditure of Rs. 6.51 lakhs.

The Ministry of Defence stated (August and September 1980) that :

— the initial 10 per cent reduction was an interim measure and subsequent reduction could be enforced only in those cases where the owners agreed to the reduction ; and

— the Army HQ had been advised to ensure that in respect of cases where the owners agreed to reduce the rent, to effect reduction where the houses were still on hire and in cases where the houses had been dehired, the difference would be treated as loss and regularised.

Station 'D'

8. *Infructuous expenditure due to delay in de-requisitioning of a vacant building*

In June 1963, a building was requisitioned under the Defence of India Act, 1962 for defence use for the duration of the emergency and four months thereafter. The rental was determined (April 1966) by the arbitrator at Rs. 865 (exclusive of municipal taxes) per month (plus Rs. 110 per month payable to the tenant for a dance floor and two rooms built by him). After revocation of the emergency, the Land Acquisition Officer issued (January 1968) de-requisitioning orders, but the building was again requisitioned (May 1968) at the request of the MEO.

On vacation of the building in October 1973 by an Air Force Officers' mess, the owner requested (March 1974) for de-requisitioning. This was, however, not done and the building remained vacant from October 1973 to February 1975 involving payment of Rs. 0.40 lakh for rent and watch and ward. In August 1975, the Air Force Command indicated that the building was in use by an Air Force unit and was still required for defence use.

Later, the building became surplus to defence requirements and administrative sanction for its de-requisitioning was accorded (January 1977) by the Air Force Command. In February 1977, the MEO requested the collector for issue of de-requisitioning order of the building, which was issued in January 1978.

As per the procedure (effective up to October 1977) it was the responsibility of the collector to make payments of recurring compensation to the interested parties in the first instance and claim reimbursement of the same from the Controller of Defence Accounts. As per revised procedure (effective 12th October 1977) the payments of rental and compensation would be made by Officers of the DLC service. However, recurring compensation for the period from December 1972 to September 1977 had not been paid by the collector to the interested parties. Recurring compensation was finally paid in December 1978 by which time further arrears had accrued. The possession of the building was yet (July 1980) to be handed over.

The case also revealed the following :

— After vacation by the officers' mess in October 1973, the building remained vacant for a period of 16 months.

— Actual utilisation of the building (area of 16,542 sq. ft.) indicated that it was used by a unit whose entitlement according to the Garrison Engineer (GE) was only 1278 sq. ft.

— While sanction for de-requisitioning was issued in January 1977, delay in settling the arrears of rent from 1972 onwards by the collector/MEO resulted in infructuous expenditure of Rs. 0.75 lakh towards payment of rental (from February 1977 to January 1978) and watch and ward charges (from February 1977 to July 1980) for retaining vacant premises.

The Ministry of Defence stated (July 1980) that the delay in de-requisitioning the building was due to frequent transfers of the State revenue authorities and series of litigations between the interested parties which had not yet been finalised. The Ministry added that the possession of the building could not be delivered due to legal complications.

9. *Summing up.*—The following are the main points that emerge :

Station 'A'

— Irregular occupation of lands (8 acres: cost Rs. 20.22 lakhs), charging of rent on frontage basis instead of on area basis (arrears of rent up to 31-12-1979 on area basis worked out to Rs. 2.43 lakhs as against Rs. 0.21 lakh on frontage basis) and non-maintenance of General Land Register in respect of area declared (1976) as 'civil area' were noticed.

— In respect of certain lands declared to be temporarily surplus and leased out for cultivation purposes, rentals amounting to Rs. 2.92 lakhs (up to March 1980) were outstanding for recovery.

Station 'B'

— 219 acres of land acquired for a rifle range was not utilised for the intended purpose (as its utilisation entailed requirement of additional private land).

— Requisitioning of private land (220 acres) and its subsequent de-requisitioning as it was not required, resulted in infructuous expenditure of Rs. 3.16 lakhs as payment for compensation, etc.

— Out of 76.65 acres of land, about 66 acres (cost: Rs. 0.66 lakh) remained unutilised for over 20 years.

Station 'C'

— 12.65 acres of land alongwith building acquired (March 1970) at a total cost of Rs. 7.15 lakhs for constructing a swimming pool was later found to be not suitable for the purpose.

— 75 houses (built by an Armed Forces Officers' Co-operative Housing Society) were hired for the defence service officers from March 1973 onwards on monthly rents which were higher than those of similar accommodation in nearby localities involving extra expenditure of Rs. 6.51 lakhs (up to September 1979).

Station 'D'

— There was infructuous expenditure of Rs. 1.15 lakhs on account of rent and watch and ward charges due to non-utilisation of a building for 16 months and delay in its de-requisitioning and settlement of arrears of rent.

36. Working of Military farms

1. *Introduction.*—The primary function of Military farms is to supply (1) hygienic pasteurised milk and other dairy products to troops and Military hospitals as per authorised scales and (2) dry fodder for farm and Army animals. At some stations, the Military farms maintain their own milch cattle and also own agricultural land for raising fodder; the deficiencies in farm production of milk and dry fodder are met by purchases from the market. At other stations, where there are no cattle holding Military farms, the milk requirements are met entirely by purchases from the market. Milk is processed and delivered to the units in the farms' own vehicles.

At stations, where Military farms are not able to supply milk, the Army Service Corps (ASC) arranges supply of milk by entering into regular contracts. Where no fresh milk can be issued either by Military farms or by the ASC, tinned milk or milk powder is issued.

Military farms are administered by the Directorate of Military Farms (DMF) at the Army Headquarters (HQ) and each Command HQ has a Deputy Director, who is responsible for the efficient running of the farms within that Command. As on 31st March 1979 there were 44 Military farms (24 cattle-holding, 5 young stock and 15 non-cattle holding depots).

2. *Performance appraisal*

2.1 *Production of milk.*—The number of adult milch cattle both in milk and dry maintained at Military farms during 1975-76 to 1978-79 were as under :

Year	Number of cattle		Total	Reduction in number of cattle	Percentage of reduction
	Buffaloes	Cows			
1975-76 . .	3,128	6,462	9,590	—	—
1976-77 . .	2,210	6,645	8,855	735	7.66
1977-78 . .	1,937	6,738	8,675	180	2.03
1978-79 . .	1,889	6,578	8,467	208	2.39

The reduction in the number of milch cattle was in pursuance of the policy of gradual elimination of buffalo stock. A team constituted by the Army HQ observed (December 1978) that maintenance of buffaloes at the Military farms was uneconomical and accordingly recommended that they be disposed of.

The production of raw milk in the farms during 1975-76 to 1978-79 was 22,983 kilolitres (kls.) (1975-76), 23,159 kls. (1976-77), 22,869 kls. (1977-78) and 20,728 kls. (1978-79). Despite reduction of 735 (7.66 per cent) milch cattle during 1976-77, production of milk increased in that year by 176 kls. (0.76 per cent). The decrease in production of milk during 1977-78 was attributed to reduction in the number of milch cattle and during 1978-79 it was partly due to lower overall average milk yield of 7.07 kgs. as compared to 7.60 kgs. during 1977-78. The Ministry of Defence stated (October 1980) that reduction in milk production in 1978-79 was mainly due to labour trouble in one Command, reorganisation of buffalo herd and decline in the fertility and increase in the percentage of dry animals.

As against the above production the quantity of milk purchased from trade was 21,756 kls. (1975-76), 22,389 kls. (1976-77), 23,602 kls. (1977-78) and 23,471 kls. (1978-79).

2.2 An analysis of percentage of satisfaction of the demand for fresh milk to troops/hospitals during 1977-78 and 1978-79 is given below :

Supplied by	Percentage of milk demand satisfied	
	1977-78	1978-79
A. Cattle holding farms:		
(*i*) Home production	42.20	40.61
(*ii*) Local purchase	8.10	8.39
B. Non-cattle holding farms Local purchase	49.70	51.00
TOTAL	100.00	100.00

The cattle holding Military farms are, thus meeting only about two-fifths of the total milk demand.

2.3 *Working results*.—The working results of the Military farms during the years 1975-76 to 1978-79 are given below :

	1975-76	1976-77 (Rs. in lakhs)	1977-78	1978-79
Government capital at the close of the year . . .	990.97	1006.73	1025.12	991.60
Fixed assets	664.83	714.05	769.94	784.81
Net profit inclusive of interest earned on Government banking account	126.64	144.43	150.43	165.74
Interest earned (included in net profit)	69.83	81.80	93.80	109.53
Net profit excluding interest .	56.81	62.63	56.63	56.21

The above table would show that bulk of the net profit shown by the Military farms is on account of interest receipts. Further, the increase in the net profit inclusive of interest (Rs. 39.10 lakhs) over these 4 years was due to increase in interest receipts, being Rs. 39.70 lakhs.

2.4 The break-up of the profit of Military farms activity-wise, as given below, would indicate that a major portion of the net profit for 3 years (from 1976-77 to 1978-79) was being obtained from farm depots which were purchasing and supplying milk :

Activity	1976-77	1977-78	1978-79	Total
		(Rs. in lakhs)		
Dairy				
Cattle holding farms . .	43.00	38.05	70.71	151.76
Non-cattle holding farms	84.19	94.54	64.57	243.30
	127.19	132.59	135.28	395.06
Cultivation	(—)0.72	2.16	(—)0.25	1.19
Fodder	17.96	13.98	30.50	62.44
Poultry	—	1.70	0.21	1.91
TOTAL	144.43	150.43	165.74	460.60

3. *Pricing of milk*.—Under the present system of fixation of rates for dairy products supplied free to troops/Military hospitals, separate sale rates are fixed for each station for a period of 6 months on the recommendations of a Board of Officers appointed by the Station Commander. These rates are fixed on the basis of local market rates of similar quality of milk likely to prevail during the next 6 months plus a surcharge of 22 paise per litre on account of pasteurisation and delivery charges. In case of a rising trend in the prevailing market prices, higher sale rates up to a maximum of 20 per cent over the market rate of the corresponding season of the preceding year could be fixed. The rates for paying consumers were to be less by 5 paise and 10 paise per litre for officers and other ranks respectively.

The free issue rates of milk fixed under the existing pricing policy are higher compared to the cost of production and average purchase rates (as is evident from the table below). As per the report of the Study Group (1974), the sale rates were fixed higher because of "escalation" of local market/civil milk scheme rates due to better quality and specification of farm produced milk supplied by the Military farms and then increasing these further by 22 paise per litre to cover pasteurisation and delivery charges.

Year	Quantity of milk issued to troops (in lakhs of litres)	Average cost of production* (Rs. per litre)		Average sale rate
1975-76	485.20	1.84 to	2.09	2.37
1976-77	486.63	1.84 to	2.10	2.38
1977-78	512.18	1.87 to	2.09	2.41
1978-79	493.81	1.93 to	2.13	2.48

*of cows, standard, blended and homogenised milk.

The profit of the Military farms, thus, arises mainly as a result of the inflated rates charged for milk supplied free to the troops.

4. *Subsidy on issue of milk to paying consumers.*—The overall subsidy to cover the difference between cost of production and sale realisations in respect of paying consumers, which was adjusted as credit in the trading account of dairy section, aggregated Rs. 26.79 lakhs over the period from 1975-76 to 1978-79 as shown in the following table :

Year	Quantity of payment issues of milk (in kilolitres)	Amount of subsidy adjusted as credit in the Trading Account (Rs. in lakhs)
1975-76	4,048	8.51
1976-77	3,388	6.29
1977-78	3,189	6.63
1978-79	2,960	5.36

The main reason for subsidy was fixation of low payment issue rates of buffalo milk in some of the areas.

5. *Loss on account of pasteurisation and delivery charges.*—In January 1975, orders were issued by the Army HQ for levying of a surcharge of 22 paise per litre of milk (from 1st April 1974) to cover the pasteurisation and delivery charges. The table given below shows that the actual pasteurisation and delivery charges of milk during 1975-76 to 1978-79 were higher than the surcharge rate fixed, thus, resulting in a total loss of Rs. 210.17 lakhs during these years.

Year	Total milk sold (in kilo litres)	Average (actual) pasteurisation and delivery charges (paise per litre)	Loss suffered (Rs. in lakhs)
1975-76 .	52,568	31.81	51.57
1976-77 . . .	52,413	32.74	56.29
1977-78 . . .	54,708	30.60	47.05
1978-79 . . .	52,427	32.54	55.26

While a decision was taken (November 1979) to levy actual pasteurisation and delivery charges, orders implementing this decision were yet (October 1980) to be issued.

6. *Losses on account of issues of butter.*—Butter is not an item of ration to troops but finds place in the scale of hospital diet. In addition, butter is sold to paying customers. The trading in butter for the period 1975-76 to 1978-79 indicated a total loss of Rs. 32.40 lakhs as indicated in the table below:

Year	Quantity of butter (in kgs.)			Production rate (Rs. per kg.)	Sale rate (Rs. per kg.)	Loss on (Rs. in lakhs)	
	Produced	Free issues	Payment issues			Free issues	Payment issues
1975-76 .	283,087	108,190	123,032	23.29	18.67	4.57	6.53
1976-77 .	323,684	156,809	118,767	22.33	19.37	2.68	5.32
1977-78 .	249,869	124,312	97,212	22.84	18.47	3.30	4.00
1978-79 .	270,431	153,246	87,236	23.53	21.03	3.42	2.58
						13.97	18.43

Loss in trading in butter was mainly due to the sale rates being fixed lower than the cost of production with a view to maintaining sale rates in line with the market rates and attracting customers. In order to reduce losses, the Army HQ issued instructions in January 1977 to restrict payment issues of butter.

An examination by Audit of the free and payment issues of butter during 1977-78 in Command 'A', however, revealed that while the overall percentage of payment issues to total production of butter was brought down from 50 to 30 per cent, payment issues in 4 Military farms ranged from 60 to 90 per cent resulting in continued losses.

According to the Ministry (October 1980), butter is a by-product in the trading of standard milk and the instructions issued in January 1977 were intended to restrict the sale of butter at places where it was not a by-product as a result of sale of standard milk.

7. *Concentrate scheme to increase milk yield.*—With a view to increasing the milk yield of animals in Military farms, a scheme for issue of concentrate ration on enhanced scale was approved (December 1975) by the DMF on a trial basis for 6 months commencing from 1st January 1976. The scheme was extended from time to time. Considering the increase in milk production *vis-a-vis* cost of extra ration, the DMF found (September 1977) the scheme to be beneficial and accordingly decided to adopt the increased scales of ration for different categories of animals initially for a period of 2 years with effect from 1st October 1977. A Command-wise analysis of the average milk yield per animal in Military farms is given below :

Command	Milk yield in litres per animal					
	1975-76		1977-78		1978-79	
	Buffaloes	Cows	Buffaloes	Cows	Buffaloes	Cows
'A' . . .	4.2	7.1	4.8	8.3	4.3	6.9
'B' . . .	4.7	7.8	4.3	7.3	3.8	6.6
'C' . . .	4.9	8.4	5.1	9.5	3.7	7.0
'D' . . .	4.0	—	3.9	—	3.6	9.0
'E' . . .	—	—	—	9.4	—	8.5
All India average .	4.6	7.8	4.7	8.5	3.9	6.9

It would be seen from the above that generally there had been a decrease in the average yield of milk per animal.

A review of the working of the scheme in 4 Military farms in Command 'B' revealed that during October 1977-March 1979, although 7.75 lakh kgs. of extra concentrate ration was fed to cows and buffaloes; instead of an increase in milk production of 12.67 lakh litres as expected, there was shortfall of 10.83 lakh litres involving a loss of Rs. 24.77 lakhs.

According to the Ministry, the loss of Rs. 24.77 lakhs was due to non-materialisation of expected increase in milk yield in 4 Military farms, as the performance of cattle depended on their genetic inheritance, agro-climate conditions, fertility state of the herd, general management and outbreak of diseases.

While reviewing the scheme in April 1978, the DMF himself observed that the farms which had not shown improvement in milk production after the introduction of new feeding scales, were lacking in cattle management and that the animals were not getting their authorised ration in such farms. In his opinion, the possibility of malpractices in these farms could not be ruled out.

8. *Cost of production of milk in Military farms vis-a-vis cost of procurement from trade.*—A comparison of the local purchase rate of milk per litre for the year 1977-78 with the cost of production of milk in Military farms at 14 stations showed that Military farms produced milk at rates ranging from Rs. 2.42 to Rs. 4.70 per litre (buffalo) and Rs. 1.69 to Rs. 2.25 per litre (cow) against the corresponding local purchase rates ranging from Rs. 1.70 to Rs. 2.61 per litre (buffalo) and Rs. 1.55 to Rs. 1.60 per litre (cow).

As a result of the study, the Study Group recommended (December 1978) closure of 12 Military cattle holding farms in 3 Commands and their conversion into Military farm milk depots. None of the 12 Military farms had been so converted (October 1980). The recommendations of the study group were stated (October 1980) to be under consideration of the Ministry of Defence.

9. *Fodder cultivation in Military farms.*—An analysis of the cost of production of green fodder for 1977-78 and 1978-79 in different Commands is given below :

Command	Average cost of production of green fodder per 100 kgs.	
	1977-78 Rs.	1978-79 Rs.
'A'	5.87	7.93
'B'	4.90	6.63
'C'	7.80	8.15
'D'	5.34	6.65
'E'	1.99	5.00

The following points emerge from the above :

— During 1977-78 the average cost of production of fodder varied from Rs. 1.99 to Rs. 7.80 (per 100 kgs.) from Command to Command.

— The cost of production of fodder in Commands 'A', 'C' and 'D' was very high.

— The cost of production of fodder during 1978-79 was higher.

The Ministry of Defence stated (February 1981) that the cost of production of fodder between farms and also between Commands was bound to vary and was a common feature in farming.

10. *Other points of interest*

10.1 *Cultivation in a Military farm.*—A review in audit of the statistics of crop yields during 1975-76 to 1978-79 in a Military farm 'X' having 230 acres of fertile land with irrigation facilities provided by 12 tube-wells revealed that compared to the production in 1975-76 the crop yield had gone down during 1977-78 and 1978-79 as indicated below :

Year	Average yield per hectare (in kgs.)					
	Mustard	Wheat	Barley	Peas	Sugarcane	Paddy
1975-76 . . .	1,261	3,505	1,077	1,275	11,683	3,730
1976-77 . . .	No crop	3,289	1,004	1,560	50,615	4,470
1977-78 . . .	652	2,185	377	431	21,063	3,657
1978-79 . . .	257	2,040	No crop	138	16,975	3,487

The Ministry stated (October 1980) that the main reasons for deterioration in crop yields during 1977-78 and 1978-79 were unsatisfactory electric supply to tube-wells and delay in disposal of sugarcane crop for 1977-78. The Ministry added that measures were being taken to bring changes in the cropping pattern of the concerned Military farm by introducing new crops, which required less irrigation or could be cultivated as barani crops.

10.2 *Lift irrigation scheme in a Military farm.*—Sanction was accorded by the Ministry of Defence in December 1972 for provision of lift irrigation in a Military farm 'Y' at an estimated cost of Rs. 2.23 lakhs (revised to Rs. 3.09 lakhs in June 1974). Tender for the work required was accepted by the Military farm authorities in November 1973 and the work was awarded to a contractor for completion in 4 months. The solvency certificate furnished by the contractor indicated that he was an electrical and hardware agent and supplier.

Five extensions of time up to January 1975 were granted to the contractor and in March 1975, he intimated his intention to terminate the contract. Although there were a number of defects and works were incomplete, the scheme was formally inaugurated in December 1975. A Technical Board, which examined the incomplete works in January 1976, pointed out the absence of any record regarding the quality of material utilised. An over-payment of Rs. 0.23 lakh made to the contractor, which was established by a departmental board in April 1975, was still (October 1980) to be recovered from him.

The Military farm authorities stated (February 1980) that the scheme was working at 50 per cent efficiency. Though the project envisaged additional irrigation of 51 hectares of land, the irrigated cultivation increased by only 6 hectares since October 1976.

The Ministry stated (October 1980) that a staff Court of Inquiry would be held shortly to fix responsibility for the lapses, if any. The Ministry added that a Board of Officers was also being held to find out ways and means to improve the efficiency of the lift irrigation.

11. *Summing up.*—The following are the main points that emerge from the review :

— Decrease in raw milk production during 1978-79 was in part due to lower average milk yield compared to the previous year.

— The cattle holding Military farms were meeting only about two-fifths of the total demand of milk.

— Bulk of the net profit shown by the Military farms was on account of interest earned on Government banking Account. Moreover, the net profit shown by the Military farms mostly accrued from farm depots (which were supplying purchased milk).

— The free issue rates of milk fixed under the existing pricing policy are much higher than the cost of production and average purchase rates. The profit, thus, earned by the Military farms was due to the inflated rates charged for milk supplied to troops.

— The overall subsidy to cover the difference between cost of production and sale realisations in respect of paying consumers aggregated Rs. 26.79 lakhs during 1975-76 to 1978-79.

— Actual pasteurisation and delivery charges during 1975-76 to 1978-79 ranged from 30.60 to 32.74 paise per litre as against the rate of 22 paise being levied from 1st April 1974, thereby resulting in losses aggregating Rs. 210.17 lakhs during the 4 years.

— The loss in trading in butter (free and payment issues) aggregated Rs. 32.40 lakhs during 1975-76 to 1978-79 due to the sale rates being fixed lower than the cost of production.

— There was a shortfall in milk production of 10.83 lakh litres (involving a loss of Rs. 24.77 lakhs) instead of an increase of 12.67 lakh litres as anticipated as a result of introduction of concentrate rations in 4 Military farms in one command during October 1977—March 1979.

— The cost of production of milk was higher in Military farms as compared to the local purchase rate of milk. A study team had accordingly recommended (December 1978) closure of 12 cattle holding farms in 3 Commands and their conversion into milk depots.

— In Military farm 'X' with a large area of fertile land and irrigation facilities, there was unsatisfactory yield of crops during 1977-78 and 1978-79.

CHAPTER 8

NAVY

37. **Extra expenditure in the procurement of a store**

In March 1977, the Naval Headquarters (NHQ) forwarded an indent to a Naval procurement agency for the procurement of 12 tonnes of tin ingots through the Minerals and Metals Trading Corporation (MMTC). The MMTC had already intimated (February 1977) that payment of earnest money at 2 per cent of the selling price of the total requirement was a pre-requisite at the time of registration of requirement as per the Import Trade Control (ITC) Policy. The Naval procurement agency asked (April 1977) the accounts authorities to send a demand draft for Rs. 16,695 towards earnest money in favour of the MMTC for registration. Although payment of earnest money was a statutory requirement under the ITC Policy, the accounts authorities insisted on specific Government orders for such payment.

The NHQ, referring to an earlier transaction of November 1975, pointed out (September 1977) to the MMTC that the condition regarding payment of earnest money was not applicable to the Defence Department, but the MMTC insisted on payment of the same. In January 1978, the Ministry accorded sanction to the payment of earnest money to the MMTC at the time of registration of requirement by the Naval authorities. In the meantime, the MMTC increased the selling price of tin from Rs. 1.29 lakhs per tonne (rate prevailing during April—June 1977) to Rs. 1.55 lakhs per tonne (applicable during April—September 1978); the Naval procurement agency accordingly requested (June 1978) the NHQ for provision of additional funds, confirmation of which was received soon after. The payment of earnest money of Rs. 37,200 was ultimately made to the MMTC by the accounts authorities on 27th June 1978. The Naval procurement agency placed the order on the MMTC in July 1978 and the entire quantity of the store was received by a Naval store depot in August 1978.

According to the Controller General of Defence Accounts (May 1980), pending receipt of Government orders, if the Naval authorities felt that it was imperative for payment of earnest money being made, they should have approached the accounts authorities with a request for provisional payment of the amount.

Thus, the inordinate time taken in sorting out the small matter of payment of earnest money to a public sector undertaking amounting to Rs. 16,695, even though such a payment was a statutory requirement under the ITC Policy, resulted in extra expenditure of Rs. 3.24 lakhs (including sales tax) owing to escalation in price.

CHAPTER 9

AIR FORCE

38. Construction of blast pens

In February 1970, a contract for construction of 18 blast pens (to protect aircraft and stores against aerial attacks) alongwith dispersal taxi tracks and link roads was concluded by the Central Public Works Department (CPWD) with contractor 'A' for Rs. 76.83 lakhs. Out of 18 biast pens, 11 were scheduled for completion within 12 months reckoning from 10th March 1970 and the remaining 7 within 6 months thereafter provided the site was made available within 10 months after commencement of work.

After progressing the work up to 15 per cent (value : Rs. 10.68 lakhs) contractor 'A' stopped further work in April 1971 on the ground that he had suffered heavy losses by way of idle machinery and labour due to belated and piecemeal supply of designs and drawings and hindrances created by the supervisory staff and the Air Force authorities. Contractor 'A' also gave (April 1971) notice of exercising his right under the terms of the contract to terminate it. The contract was, thereafter, rescinded (May 1971) by the CPWD after obtaining advice of the Ministry of Law and contractor 'A' was notified that the balance work would be got executed through another agency at his risk and cost.

As a result of trials conducted (May 1971) at another Air Force station, the Air Headquarters instructed (June 1971) the concerned Air Force Command that pending finalisation of a new design of blast pens, the construction of tangent walls and blast walls of blast pens be held in abeyance unless already constructed. The Air Force Command accordingly informed (July 1971) the CPWD that :

- in respect of blast pens where work had already commenced, necessary modifications were to be incorporated; and
- where work had not commenced or where only excavations had been done, the work should be kept in abeyance pending finalisation of the new design of the blast pens.

In pursuance of these instructions, work in respect of 11 blast pens was held in abeyance. In the meantime, the work relating to 7 blast pens left over (estimated value : Rs. 24.65 lakhs) by contractor 'A' was split into three parts and awarded to three contractors 'C' (for Rs. 15.75 lakhs), 'D' (for Rs. 13.44 lakhs) and 'E' (for Rs. 13.63 lakhs) during January—March 1972. The work was completed during February—March 1974 at a total cost of Rs. 40.39 lakhs against its original estimated cost of Rs. 24.65 lakhs.

In July 1972, the Air Headquarters finalised the new design for blast pens. Thereafter, two contracts for construction of 8 more blast pens were concluded by the CPWD with contractors 'F' and 'E' in December 1972 and March 1973 respectively at a total cost of Rs. 34.87 lakhs against the estimated cost of Rs. 19.12 lakhs. Contract for the construction of the remaining 3 blast pens could not, however, be concluded as land required for them had not been acquired.

During an inspection of the station in February 1973, the Chief of Air Staff observed that construction of additional 11 blast pens over and above those already in existence and those (7) already under construction would not be desirable. Accordingly, in May 1973 the Air Force Command informed the CPWD that 8 blast pens on which only 5 per cent work had been completed and another 3 for which site was still to be made available, were no longer required. Work on 8 blast pens was discontinued in June 1973 by giving due notice to contractors

'F' and 'E'. The expenditure of Rs. 5.07 lakhs incurred on the construction of these 8 blast pens, thus, became infructuous.

In the meantime (March 1973), contractor 'A' went in for arbitration against the rescission of the contract by the CPWD, claiming Rs. 21.77 lakhs which, *inter alia*, included claims on account of idleness of machinery and labour (Rs. 5.30 lakhs) and loss (Rs. 11.52 lakhs) due to rescission of contract. The CPWD submitted a counter-claim for Rs. 17.40 lakhs including the estimated extra cost (Rs. 11.57 lakhs) for getting the balance work executed through other contractors at the risk and cost of contractor 'A'. The arbitrator awarded (May 1976) a sum of Rs. 2.48 lakhs in favour of contractor 'A' (which was paid to him in March 1979) and rejected the counter-claim of the CPWD. In his award, the arbitrator observed that the contracting authority had failed to comply with all the obligations of the terms and conditions of the agreement and that the rescission of the contract by the CPWD was not in order. The CPWD challenged (March 1977) the non-speaking award in a Court of Law. In February 1979, the Court upheld the award and made it rule of the Court. As a result, recovery of actual extra cost of Rs. 9.76 lakhs could not be enforced against contractor 'A'.

The Ministry stated (September 1980) that immediately after the 1971 conflict, assessment of the situation was carried out and short-comings in different fields and other factors were analysed; the earliest decision to stop further progress of work on the construction of blast pens at the station could be taken in 1973.

The following points emerge :

- Had the stoppage of work of construction of blast pens been ordered soon after the 1971 conflict, the infructuous expenditure of Rs. 5.07 lakhs could have been largely avoided.
- Failure on the part of the CPWD to comply with the obligations of the terms and conditions of the contract resulted in award and payment of Rs. 2.48 lakhs to contract 'A' and rejection of counter-

claim of CPWD of Rs. 17.40 lakhs which included Rs. 9.76 lakhs on account of actual extra cost of work done at risk and cost of contractor 'A'.

39. Extension of life of an aircraft—non-completion of approved task.

The manufacturers had specified a total life of 15 years for a certain type of aircraft held by the Air Force; 75 per cent of the fleet had completed its life by 1978 (of which 16 per cent by 1976 itself) and were due for withdrawal from service thereafter. Taking into account the requirement of this aircraft during the next 10 years (up to 1985-86) and the possibility of extending their life, negotiations were undertaken (1975) with the manufacturers to extend the life of these aircraft by another 5 years.

A team of specialists from the manufacturing country, which visited India in September 1977, recommended that the life of these aircraft could be extended by 5 years by carrying out certain checks/modifications by December 1979. For the successful completion of the task in time, apart from establishing necessary facilities in a base repair depot, the services of two foreign specialists were to be obtained for one year to guide the Indian technicians. In January 1978, the Air Headquarters (Air HQ) proposed a phased programme of repair/modification, which was approved (July 1978) by Government and the task of special repairs for extension of life of the aircraft was entrusted to the base repair depot after the Air HQ had confirmed (June 1978) that this task was within its capacity. The special repairs for extension of life of 28 per cent of the fleet were to be completed by March 1980 and those for the remaining 47 per cent were to be synchronised with their overhaul during the next 4 years up to 1981-82. The expenditure on the programme was estimated at Rs. 96.87 lakhs.

Government sanctioned (February and October 1978) import of some sets of modification kits required for this purpose from the same manufacturing country at a cost of Rs. 90.20 lakhs. The employment of two foreign specialists at a cost of Rs. 2.74 lakhs was also sanctioned (March 1979) for a period of 12 months later (March 1980) extended for another 12 months. The modification kits were ordered in February, March and December 1978 and the supplies started arriving from January 1979, but some of the items were yet (October 1980) to be received; the foreign specialists arrived in India in March 1979.

Of the 28 per cent of the fleet on which special repairs for extension of their life were to be completed by March 1980, work on 6¼ per cent only was completed till March 1980; of the balance 47 per cent of the fleet, on which these special repairs were to be synchronised with their overhaul, work on 6¼ per cent only was completed till March 1980. Thus, work was completed on 12½ per cent only (till March 1980) of the fleet.

Taking into account the work that could actually be done by the depot and to avoid any consequential adverse effect on the availability of operational aircraft for the units, the Ministry of Defence sanctioned (April 1980) despatch of 12½ per cent aircraft to the country of manufacture for special repairs for extension of their life together with their overhaul at an estimated cost of Rs. 235 lakhs. These aircraft were actually despatched to that country during March—August 1980 and were yet (October 1980) to be received back after repairs.

In the meantime, to clear these aircraft for operation beyond March 1980, when they had completed their prescribed life, a mid-life check was carried out on 22 per cent of the fleet by March 1980 as per advice of the specialists.

According to the Ministry of Defence, the repairs for extension of life of aircraft could be carried out only on 12½ per cent by March 1980; work on 22 per cent of the aircraft (of which 9 per cent have been completed till October 1980) was expected to be completed in 1980-81, on 12½ per cent in 1981-82 and on 3 per cent in 1982-83. The balance 12½ per cent of the fleet was recommended (August 1980) for being written off as it was not considered economical to undertake special repairs on them considering their residual life after repairs.

The following main points emerge :

- Although special repairs on the entire 75 per cent of the fleet were expected to be completed by December 1979, these were completed only on 22 per cent by October 1980 and Rs. 62.59 lakhs had been spent on all the modification kits.

- The inability of the base repair depot to accomplish the planned task resulted in 12½ per cent of the fleet being sent to the manufacturers for special repairs and overhaul at an estimated cost of Rs. 235 lakhs, which were yet to be received back after repairs (October 1980) and 12½ per cent of the fleet being written off and the kits procured (cost : Rs. 10.43 lakhs) therefor becoming redundant.

The Ministry of Defence stated (October 1980) that the manufacturers indicated a feasibility of extending the life up to 25 years of these aircraft for which a protocol was signed in August 1980. The technical bulletins required for this purpose were, however, yet (October 1980) to be given by the manufacturers.

Pathak

NEW DELHI
Dated the
28 FEB 1981

(G. N. PATHAK)
Director of Audit, Defence Services.

Countersigned

Prakash

NEW DELHI
Dated the
28 FEB 1981

(GIAN PRAKASH)
Comptroller and Auditor General of India.