Chapter-II

2 Performance reviews relating to Government companies

2.1 Operational performance of Tamil Nadu Minerals Limited

Highlights

The Company failed to submit the mining plans for approval of Director of Geology and Mining within the timeframe leading to their rejection and consequent non-removal of the produced granite blocks valued at Rs. 1.27 crore in two quarries.

(Paragraph 2.1.7)

Failure to impose the terms and conditions of the contract on the contractors led to non-levy of liquidated damages of Rs. 3.36 crore and non-forfeiture of security deposit of Rs. 62.50 lakh during 2002-03 to 2006-07.

(Paragraph 2.1.12)

The Company made avoidable payment of dead rent of Rs. 1.44 crore during the period 2002-03 to 2006-07 due to its failure to surrender the non-operated quarries, *etc*.

(Paragraph 2.1.21)

The Company sold granite blocks below cost of production and suffered loss of Rs. 10.69 crore in 5 to 10 departmentally operated quarries and 51 quarries operated through Raising and Raising-cum-Sales Agents.

(Paragraph 2.1.32)

Madhepalli Tiles Unit did not achieve the targeted export sales of Rs. 3.61 crore due to heavy rejections compelling the Company to sell the same in domestic market at a revenue loss of Rs. 1.67 crore.

(Paragraph 2.1.41)

The Company had not obtained the clearance from Pollution Control Board for operation of 15 out of the 17 quarries test checked in audit.

(Paragraph 2.1.43)

Introduction

2.1.1 Tamil Nadu Minerals Limited (Company) was set up in April 1978 with a view to organise exploitation of the mineral resources in the State of Tamil Nadu. At present, the Company is engaged in the commercial exploitation and export of granite; production and sale of limestone, silica and sand; and mining of graphite ore, vermiculite *etc.* The Company continues to depend largely on production and sale of granite, which contributes nearly 80 *per cent* of the revenue of the Company.

The management of the Company is vested in a Board of Directors (BOD) consisting of not less than two and not more than nine directors including the Chairman and Managing Director (CMD). The CMD is assisted by the General Manager (Technical) and the General Manager (Finance) cum Secretary in the day to day management of the Company. The Company has 102[♣] quarries including 25 non-operated quarries, eight mines[*], 11 divisions and six industrial units[#].

Scope of audit

2.1.2 The performance of the Company was last reviewed and included in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1997 (Commercial) – Government of Tamil Nadu. The Committee on Public Undertakings discussed (July/August 2003 and January 2004), the audit findings and its recommendations were awaited (August 2008). The present performance review conducted during November 2007 to May 2008 covered the activities of the Company from 2002-03 to 2006-07. The audit checks were conducted in 44 out of 77 operating granite quarries, five out of 11 divisions and five out of six industrial units. The extent of audit check carried out, *inter alia*, involved scrutiny of 75 contract files dealing with the production and sale of minerals worth Rs. 80 crore.

Audit objectives

2.1.3 The performance review was conducted with a view to ascertain whether:

- mining of granite and other minerals and cutting and polishing of granite were carried out with economy, efficiency and effectiveness;
- production of various products was as per the targets and whether the Company enforced the conditions of agreement with the contractors;

♣ 77 operating quarries comprised 38 colour granite quarries and 39 black granite quarries.

* (i) Vermaculite (1), (ii) Limestone (1), (iii) Graphite (1), (iv) Quartz and feldspar (2) and (v) Slica sand (3)

1. TAMIN Graphites, Sivaganga, 2. TAMIN Cutting and Polishing Unit, Manali, 3. TAMIN Granite Tile Plant, Madhepalli, 4. Granite Tile Unit, Sulamalai, 5. Indian Standard Sand Unit, Ennore, and 6. Vermiculite Exfoliation Unit, Ambattur.

- the sale price of the granite blocks and other ores and products covered the cost of production; and
- the Company complied with the statutory provisions relating to mining and pollution control.

Audit Criteria

2.1.4 Audit criteria considered for assessing the achievement of audit objectives were:

- Approved mining plans/plan laid down by the Company for mining of granite;
- Norms of capacity utilisation of the granite cutting and polishing and tiles units;
- Policy and terms and conditions of agreements for the purchase of raw materials and sale of products;
- Marketing policy;
- Norms for employment of statutory manpower;
- Pollution norms fixed by the Pollution Control Board; and
- Provisions of Mines and Minerals (Development and Regulation) Act, 1957; Granite Conservation and Development Rules, 1999; Mines Act, 1952; Metalliferious Mines Regulation Act, 1961; Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.

Audit Methodology

2.1.5 The methodology adopted for attaining the audit objectives with reference to the audit criteria was examination of:

- minutes and agenda notes of the meeting of the BOD;
- budgets, costing and stores records of the Company;
- purchase files;
- quarries/mines lease documents;
- records in respect of contracts awarded for mining of the quarries;
- files in respect of export and indigenous sale of granite blocks, ores and other products; and
- interaction with the management and issue of audit enquiries.

Audit findings

The Audit findings were reported (July 2008) to the Management/Government and were discussed (September 2008) in the meeting of Audit Review Committee on Public Sector Enterprises held on 1 September 2008. The Special Secretary to the Government, Industries Department and the CMD of the Company were present in the meeting. The views expressed by the Management have been taken into consideration while finalising the performance review. The Audit findings are discussed in the succeeding paragraphs.

Financial performance

2.1.6 The financial position and working results of the Company for the five year period ending 2006-07 are given in the **Annexures-10** and **11**. It could be seen therefrom that though the overall sales increased from Rs. 80.02 crore in 2002-03 to Rs. 101.47 crore in 2006-07, the export sales declined drastically from Rs. 21.52 crore in 2002-03 to Rs. 6.72 crore in 2006-07 mainly due to stiff competition from China.

During the five year period, the Company earned profit mainly due to interest income and other income. The operations of the Company, however, resulted in losses during 2003-04, 2005-06 and 2006-07 as could be seen from the following table:

(Rupees in crore)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07
Sales including transfer to units	83.00	93.44	105.95	112.65	107.19
Expenditure*	81.63	93.75	104.92	115.78	108.09
Operating profit(+)/loss(-)	1.37	(-)0.31	1.03	(-)3.13♣	(-)0.90

(***** Excluding interest and depreciation of Head Office assets.)

The BOD of the Company discussed (March 2004) the comparative performance of various granite quarries and found that the selling price of granite block was decreasing year after year, whereas the cost of production was increasing steadily leading to the reduction of margin considerably. The BOD directed that suitable methods should be evolved to control the cost of production so as to improve the margin. However, the Management did not initiate any efforts to improve its operations by containing the controllable factors.

The reasons for operating losses, as analysed by Audit, were on account of the following controllable factors:

- avoidable payment of dead rent in respect of non-operating quarries;

♣ Loss increased due to one time lease payment of Rs.3.40 crore.

- non-renewal of the lease leading to loss of opportunity to sell the produced granite blocks;
- shortfall in production;
- non-levy of penalty on the contractors for shortfall in production of granite blocks;
- non-viability of the Granite Cutting and Polishing Unit at Manali; and
- continuous losses incurred by the Granite Tiles Plant at Madhepalli.

These factors have been discussed in detail in the succeeding paragraphs.

Granite

Mining Plan

2.1.7 According to the Granite Conservation and Development Rules 1999 (GCDR), no lease shall be granted or renewed by the State Government unless there was a mining plan duly approved by the State Government for the development of granite deposit in the concerned area. The lease holders were required to submit the mining plans within a period of four years from the date of commencement of the said Rules and the time frame could be extended for a further period not exceeding one year. Mining plan was a pre-requisite for grant of mining lease in the case of fresh applications for lease of quarries.

The Company was having 89 quarries at the time of introduction of the GCDR and as such the Company should have submitted the mining plans in respect of all the quarries and sought approval from the Director of Geology and Mining. However, the mining plans in respect of only 72 quarries were got approved. In May 2004, the Company submitted the mining plans for another 10 quarries which were under operation. In respect of remaining seven quarries which were not under operation, the Company had not submitted the mining plans so far (October 2008). Out of the 10 plans submitted in May 2004, the mining plans of four quarries were rejected (February 2005) by the Director of Geology and Mining as the same were submitted after the due dates. The plans of six quarries were pending for approval.

Delayed submission of mining plan led to non-disposal of granite blocks valued at Rs. 1.27 crore.

Audit scrutiny revealed that out of the four quarries for which the mining plans were rejected, two quarries stopped operations in the meantime. In respect of the other two quarries, Sunjalnatham quarry (SF No.412) was being operated at the time of rejection of the mining plan and the Company could not dispose of 282 cubic metre (CBM) of black granite valued at Rs. 34.53 lakh♣. In the case of Chendarapalli quarry, even after rejection of the mining plan, the Company produced granite blocks measuring 692.043 cubic metre valued at Rs. 92.73 lakh and the same could not be disposed of for want of approval of the mining plan. Thus, in the absence of mining plan, granite blocks valued Rs. 92.73 lakh could not be sold.

♣ Net realisable value.

The Company stated (July 2008) that it had submitted the mining plans for all the operating quarries within the stipulated time and got approval. The preparation of mining plans for the non-operative quarries was delayed in anticipation of extension of time. It was also stated that the Company was in the process of applying for fresh lease as directed by the Government as far as Sunjalnatham and Chendarapalli quarries are concerned. However, Audit noticed that the concerned mining plans were submitted after the due dates and therefore were rejected by the State Government.

Mining operations

Production performance

2.1.8 The following table indicates the target *vis-a-vis* actual production of black and colour granite blocks for the five-years ending 2006-07:

(In cubic metres)

Year	Black Granite			Colour Granite		
	Target	Achieve-ment	Percentage of achievement	Target	Achieve-ment	Percentage of achievement
2002-03	9,655	8,647	90	17,480	20,419	117
2003-04	13,470	10,990	82	21,850	25,099	115
2004-05	13,090	12,405	95	26,690	27,211	102
2005-06	14,870	15,106	102	33,230	28,797	87
2006-07	17,590	13,619	77	32,115	23,730	74

The shortfall in achievement of targets, as analysed by Audit was, *inter alia*, attributable to:

- inclusion of the expected production of 1,250 CBM of colour granite blocks in the targets in respect of quarries for which mining plans were rejected/not submitted;
- litigations pertaining to some of the quarries and consequent stopping of production of 750 CBM of black granite blocks; and
- failure to achieve committed level of production by the contractors resulting in shortfall in production of 12,352 CBM of granite.

Further, the Company had not prepared any Corporate Plan so as to relate the performance with the same. Even the production targets were not linked with the approved mining plans.

The Company accepted (July 2008) the audit observations and stated that in future targets would be fixed with reference to the mining plans.

Profit and loss making quarries

Selling granite below the cost and failure of agents to achieve sales target led to loss of Rs. 13.54 crore.

2.1.9 The number of quarries which earned profit ranged between 30 and 42 during 2002-03 to 2006-07 and the total profit earned by these quarries ranged between Rs. 24.24 crore in 2002-03 and Rs. 24.87 crore in 2006-07. During the same period, the Company incurred loss of Rs. 13.54 crore in the operation of 31 to 43 quarries. The loss ranged from Rs. 1.97 crore in 2002-03 (31 quarries) to Rs. 3.55 crore (40 quarries) in 2006-07.

Audit analysis revealed that the loss was attributable to:

- selling of granite below the cost in five to ten departmentally operated quarries amounting to Rs. 9.07 crore (Paragraph 2.1.32); and
- failure to surrender the non-operated quarries on which the Company incurred dead rent of Rs. 1.44 crore (Paragraph 2.1.22 to 2.1.27).

The Company stated (July 2008) that for want of market and non-operation of some of the quarries, the loss had increased over the years. The Company further stated that steps had been taken to augment the production and control the expenditure to reduce the cost of production.

Non-posting of statutory officials

2.1.10 Section 17 of the Mines Act, 1952 read with Regulations of the Metalliferious Mines Regulation Act, 1961 requires appointment of Mines Manager, Assistant Mines Manager, Mines Foreman, Blasters and Surveyors having requisite qualifications. The Director of Mine Safety, Government of India is required to verify the availability of statutory staff. Audit observed that:

- the Director of Mines Safety raised (between July 2005 and August 2006) the issue of vacancies in respect of statutory officials on various occasions;
- against the requirement of 225 statutory posts, the sanctioned posts were 132, of which vacancies existed for 45 posts (October 2008).

By way of illustration, the case of Irumbali Survey No.37/1 quarry is mentioned below to highlight the implication of non-posting of statutory officials:

The Company approached (September 2006) the Director General of Mines Safety, Chennai Region to allow a foreman to function as Works Manager in the said quarry. However, the request of the Company was turned down and the Company was directed to suspend the mining operations. Consequently, the then Raising-cum-Sales Agents (RCSA) abandoned (September 2006) the work.

The Company stated (July 2008) that it filled 24 posts and had approached the State Government for further sanction of 93 statutory posts.

Contract Management

2.1.11 The Company calls for tenders from RCSAs and awards the contracts to them based on the highest margin between the purchase price quoted by the RCSAs and the cost of production of granite. In the event of RCSAs not coming forward to take up the contracts, the Company calls for tenders from

Raising Agents (RAs) and awards contracts to them on the basis of lowest quoted rates. The agents themselves have to engage the labourers and meet the other expenditure connected with the production of granite. The contracts with the RA/RCSA, *inter alia,* include the following conditions:

- The contractors have to pay security deposit of one *per cent* of the annual sale value or Rs. 2.50 lakh, whichever is higher. The deposit is collected in the form of cash (40 *per cent*) and Bank guarantee (60 *per cent*).
- If the RCSA/RA did not achieve the proportionate monthly targets of production and sales in a fortnight, the payment equivalent to the value of the shortfall in production would be withheld and the same would be released only if the targeted production and sales were achieved at the end of the month.
- If the targets are not achieved for two consecutive months, the Company can suspend the work temporarily for spells ranging from 15 days to one month, apart from levying liquidated damages and forfeiture of the security deposit.
- If the RCSA/RA fails to achieve the cumulative target of production and sales to the extent of fifty *per cent,* the contract is liable to be terminated by the Company without any notice.
- Increase in the selling price in the subsequent years by 10 to 20 *per cent* over the previous year rate subject to mutual consent.

Audit scrutiny revealed that the above mentioned terms and conditions were not observed by the Company in many cases as discussed below:

Non-implementation of the terms of contract

Failure to impose terms and conditions of contract led to non-levy of liquidated damages of Rs. 3.36 crore and non-forfeiture of security deposit of Rs. 0.62 crore.

2.1.12 Under the delegation of powers, the CMD is competent to grant waiver of the levy of liquidated damages (LD) and consolidated statement of the LD waived is to be put up to the BOD. A test check in audit revealed that the amount foregone during 2002-03 to 2006-07 on account of non-forfeiture of the security deposit (SD) was Rs. 62.50 lakh in 25 out of 29 cases test checked in audit. On the other hand, the Company failed to levy (during 2002-03 to 2006-07) LD of Rs. 3.36 crore for non-achievement of production in all the 25 cases test checked in audit. Audit noticed that in none of the cases, the officials of the Company sought approval of the CMD for waiver of the LD and consolidated reports were also not put up to the BOD. Thus, there was no internal control mechanism to enforce levy of the LD/forefeiture of the SD in the event of violation of conditions by the contractors. The reasons for such failures were not on record. It was further observed that reports of the internal auditors did not contain any observation regarding the above failures.

On this being pointed out by Audit, the Company stated (June 2008) that in eight cases SD was forfeited, in another four cases refund was made based on requests from the contractors and recommendations of the field officers. In the remaining cases, SD was not forfeited as the contracts were continuing. The Company further stated (July 2008) that periodical reviews would be taken up and levy of LD would be examined on case to case basis by the CMD and would also be put up to the BOD periodically in future. A few cases of non-implementation of the terms of the contract are discussed below:

2.1.13 The Company awarded a contract to Amman Granites (December 2003) in respect of Kasivareddihalli and Kathirnaickenhalli quarries with 30 CBM of random and 10 CBM of monument black granite as monthly target of production which the contractor did not achieve. The management decided to waive (September 2005) the LD based on the proposal of the Divisional Manager (DM) that the rock in the quarry posed marketability problem. However, the BOD of the Company did not agree with the same and directed (September 2005) to recover the LD from the contractor amounting to Rs. 5.94 lakh which was yet to be recovered (September 2008).

2.1.14 The contract in respect of Chendarapalli quarry for production of 600 CBM *per annum* was awarded (January 2005) to Everest Enterprises who did not commence the quarrying on the plea that there was no approach road. The DM certified (May 2006) the contention of the contractor overlooking the fact that the quarry in question was in existence for the last 14 years and the Company itself had created an approach road earlier. Thus, the wrong certification by the DM resulted in loss of revenue of Rupees one crore to the Company.

The Company stated (July 2008) that the contract was cancelled forfeiting the SD. The reply of the Company was however silent on the levy of LD and action initiated against the DM for false certification on the non-existence of approach road.

2.1.15 In respect of 13 quarries♣, the Company entered (between 2001 and 2004) into contracts with RAs for their operation. Instead of forfeiting the SD and levying of the LD for the failures of the contractors to adhere to the conditions of the contract relating to production, the contracts were extended for further period of two years. Even during the extended period, the performance of the contractors remained poor.

2.1.16 The Company awarded (July 2002) the contract with a monthly production target of 225 CBM of granite blocks at Mahimandalam, Pit-I, II and III quarries to Ashwin Granites, Chennai who stopped production and sales since February 2003. Despite suffering revenue loss of Rupees four crore, the Company did not impose the LD of Rs. 62.18 lakh.

The Company stated (July 2008) that the deposits in these quarries were of poor quality and therefore penal clauses were not invoked. However, there was no order of the competent authority for waiver of the LD.

2.1.17 Devinarayan Exports (Private) Limited entered into an agreement (September 2004) for operation of Pit-VII, VIII of Mahimadalam quarry. The

♣ 1.Keelaiyur, 2.Thogaimalai, 3.Thiruthangal, 4.Keelavalavu 297/1, 5.Keelaiyur 398 I&III, 6.Keelavalavu 272/3, 7.Keelavalavu 272/2-I, 8.Keelevalavu 272/2-III, 9.Keelevalavu 297/5, 10.Naganoor, 11.Keelavalavu 398/I to IV 12.Keelaiyur 398/IB and 13.Therkukallidaikurichi.

contractor did not provide men and machinery to achieve the targeted production of 150 CBM of granite blocks. Though the Company issued many notices intimating non-achievement of the target, it did not recover the LD amount of Rs. 32.40 lakh.

The Company stated (July 2008) that the deposits were of poor quality and therefore penal clauses were not invoked. The reply is not acceptable as it was mentioned in the tender documents that RA could visit the quarry and study the area and nature of the deposits before quoting the rates in the tender.

2.1.18 In respect of seven quarries♦, though the RCSAs did not achieve the proportionate monthly targets of production and sales, the Company released Rs. 1.94 crore towards raising cost against the terms and conditions of the contract.

2.1.19 The Company entered into contracts (January 2002 and May 2002) with S. V. Granites and Swan Stone (P) Limited in respect of Jammanahalli and Ajjanahalli quarries with monthly production target of 40 CBM and 50 CBM of granite blocks respectively. The contractors did not achieve the monthly targets of production and sales. Instead of forfeiting the SD (Rupees five lakh) and levying of the LD (Rs. 32.22 lakh), the contracts were extended for further period of two years and during the extended period also the performance of the contractors remained poor.

Failure to increase the selling price as per agreement led to loss of revenue of Rs. 3.33 crore.

2.1.20 In 19 quarries* test checked in audit, the Company did not negotiate with the RCSA for increase in the sale price of the granite blocks over the previous year's rate by 10 to 20 *per cent* as provided in the agreement resulting in loss of revenue of Rs. 3.33 crore during February 2003 to September 2007 (worked out at the minimum rate of 10 *per cent* as contemplated in the agreement).

The Company stated (July 2008) that RCSAs were not willing to increase the selling price quoting the market condition, development cost, *etc*. However, no such records were produced to audit to substantiate the reply.

Payment of dead rent

2.1.21 In respect of quarries operated, the Company was required to pay seigniorage fee♣ on the quantum of granite removed or dead rent with reference to the areas held on lease, whichever was higher. Thus, it was desirable that the Company minimised the extent of non-operated quarries to avoid payment of dead rent.

♦ 1.Ologalapadi, 2.Perumbakkam, 3.Kunnam 9/6, 4.Kunnam 29/3, 5.Kunnam 138/2&139/4, 6.Thiruvakkarai and 7.Siruvalai.

* 1.Mahimandalam 1,2,3, 2.Mahimandalam 7&8, 3.Perumbakkam, 4.Kunnam 138/2 and 139/4 5.Kunnam 29/3, 6.Velanandal, 7.Veeranam 126, 127, 8.Kunnam 9/6 9.Siruvalai, 10.Thiruvakkarai 168/1, 11.T.Velur, 12.Mothakkal, 13.Ajjanahalli, 14.Kathirnaickenhalli 254, 15.Kathirnaickenhalli SF.4, 16.Jammnahalli, 17.Madathahalli, 18.Ponnerimalai and 19.Therkukallidaikurichi.

♣ Seigniorage fee means royalty.

Audit noticed that over a period of five years ending 2006-07, dead rent of Rs. 4.40 crore was paid by the Company. The reasons for payment of dead rent as analysed by Audit, were:

- non-operation of some of the quarries taken on lease.
- obtaining fresh lease of quarries, without any concrete action plans for their utilisation.
- payment of dead rent in respect of the quarries for which lease was yet to be surrendered (for 38 quarries) or surrender proposals (for nine quarries) were pending with the Government.

The Company stated (July 2008) that they were operating quarries having marketable products. Variety of colours was very much essential to overcome the tough competition from private operators and hence applying for fresh lease was required for self sustenance. The Company added that market potential and changing taste of the buyer determined the operation of the quarry and it needed to have reservoir of quarries.

During the five years up to 2006-07, the Company incurred avoidable dead rent of Rs. 1.44 crore.

The reply of the Company is not acceptable as the Company was finding it difficult even to appoint statutory mining personnel in the existing quarries to operate them. Therefore, acquisition of fresh quarries would add to the number of non-operating quarries.

A few illustrative cases of avoidable payment of dead rent of Rs. 1.44 crore are discussed below:

2.1.22 The Company operated the quarry in Echoor Village till 2000 and thereafter did not operate it for five years and the quarry became deemed lapsed, though the lease was up to 2004. The Company applied for fresh lease in October 2004 and thereafter the produced material could be removed from the quarry between August and September 2007. In the meantime, the Company had to pay dead rent. Similarly, in respect of lease of the quarry in Mattaparai village, dead rent for the period beyond the period of deemed lapse of the lease was paid by the Company. Thus, the Company paid dead rent of Rs. 5.97 lakh for the non-lease period in these two cases.

2.1.23 In respect of two quarries (Kollankuttai and Chandrapuram), the Divisional Officers submitted (June 2005) the detailed report on the viability of operating the quarries after a delay of six years resulting in avoidable payment of dead rent of Rs. 17.08 lakh for the intervening period.

2.1.24 The Company did not surrender the quarry at Madathahalli despite being aware (October 2003) that quarrying operation could not be carried out by the RA as there was no deposit in the area and this resulted in avoidable payment of dead rent of Rs. 13.97 lakh up to March 2008.

2.1.25 In another nine quarries•, non-submission/rejection of the mining plans led to non-operation of the quarries and payment of dead rent of Rs. 50.54 lakh during the period 2004-05 to 2006-07.

2.1.26 Though the Company surrendered 10 quarries♥ partly or fully in 1998, the surrender was accepted by the Government only in December 2005, contrary to the agreement condition which provided for notice of six months on either side for surrender/cancellation of the lease. The delay in accepting the surrender by the State Government resulted in avoidable payment of dead rent of Rs. 14.62 lakh.

2.1.27 Though the Company submitted the surrender proposals between May 1996 and November 1999 in respect of eight leasehold areas♠, the proposals were returned by the Geology and Mining Department in January 2005 (after a gap of five to eight years) directing the Company to comply with some procedural formalities. The Company complied with the same in July 2005. However, the surrender proposals were yet to be accepted (March 2008) by the State Government. This delay resulted in unnecessary payment of dead rent of Rs. 41.80 lakh.

Discrepancies in measurement

2.1.28 According to the Mines and Minerals (Development and Regulation) Act 1957, the holder of the mining lease has to pay seigniorage fee (royalty) in respect of any mineral removed or consumed from the lease hold area at the prescribed rate. The State Government directed (1986) the Company to pay seigniorage fee on the gross volume of blocks removed from the quarries.

The variation in measurement taken by the Company and the Mining Department for the granite sold ranged between 7 to 132 *per cent.*

2.1.29 A test check conducted by Audit in respect of 60 quarries operated in the year 2005-06 revealed that as against 45,098 CBM of granite despatched for sales and transfer to its units, the Company paid seigniorage fee for 58,717 CBM indicating a variation of 13,619 CBM. The variation ranged between seven *per cent* and 132 *per cent* due to adoption of different methods for measurement by the Mining Department and the Company. While the measurement by the former was on the gross volume basis for determining the seigniorage fee, the measurement by the Company for sales was taken after deleting the visible portion of natural defects not acceptable to the buyers.

The Company stated (July 2008) that if the Company norm of giving allowance of five centimetres on all the sides of the blocks was adopted, the difference would be 6,494 CBM and would work out to 11 *per cent* of the total sales. The reply of the Company is not acceptable as the difference was high

---

• 1.Chendarapalli 383/1, 2.Sunjalnatham, 3.K.Bantarapalli 409&410 4.K.Bantarapalli 419 5.Chendarapalli 400, 6.Sulamalai 247, 7.Chendarapalli 340/1, 8.Mathruthirukkai 85/1&86/1, 9.Kondapanaickenpalayam 148.

♥ 1.Koogaiyur, 2.Varikkal 92/2, 3.Korekani 143/1, 4.Nallavur, 5.Kallakulathur 177/6, 6.Mailam 62/3, 7.Mailam 193, 8.Lakshmanapuram 82/3A, 9.Peravur 71 10.Mailam 99.

♠ 1.Madathahalli, 2.Jarimankurichi, 3.Gopinathampatti, 4.Kookuthamaradhahalli, 5.Menasi, 6.Nallakutlahalli, 7.Reddhihalli and 8.Badrahalli.

even after giving allowances for defects and it did not analyse the reasons for such differences to ensure that there were no pilferages.

The Company measured and sold 352 blocks in a single day, which was not practically possible.

2.1.30 According to the instructions, the measurement was to be done in a professional manner and certified by an inter-divisional committee. Audit noticed that in two quarries at Thogaimalai in Karur district, the measurement and certification of the quality of the blocks as seconds were carried out in a casual manner, which could be inferred from the fact that 352 blocks were certified on a single day *i.e.* 30 March 2007 and the invoices were issued by the corporate office on the same day.

The Company stated (July 2008) that the 352 blocks were certified on the same day for account purposes. The Company's reply indicated that they had compromised on measurement as a single block would take a minimum period of 30 minutes for measurement as admitted by the Company and it might not be feasible to measure 352 blocks in a day. On this being pointed out during the meeting of Audit Review Committee, the CMD agreed to look into the issue.

2.1.31 The Company issued (August 2001) instructions that an allowance of five centimetres only should be allowed on each side of the blocks for damage during transit to the destination. In ten quarries test checked in audit, the Melur Division allowed the buyers an allowance of ten centimetres on each side during 2003-04 to 2006-07 resulting in loss of revenue of Rs. 1.74 crore calculated at the least selling rates in the relevant period.

The Company stated (July 2008) that the excess allowances in any of the block would be only due to defect, otherwise the entire block would get rejected. The argument of the Company was against its own instructions.

Marketing

Domestic Sales

2.1.32 The normal procedure for sale is to call for global tenders every year in March. Based on the offers received, tenders are finalised by a committee constituted by the BOD. The prices fixed in the tender are normally valid for a period of one year. The particulars of cost of production *vis-a-vis* sales of black and colour granite during the period 2002-03 to 2006-07 are given below:

(Rupees in crore)

Year	Quantity (In CBM)	Cost of production	Sales
2002-03	27,549	45.49	67.77
2003-04	35,090	52.07	73.92
2004-05	39,866	59.93	81.52
2005-06	44,470	66.79	88.19
2006-07	38,623	59.80	81.12

(Besides cost of production, sales overheads are also incurred to sell the products. However, cost of sales was not readily available with Head Office of the Company).

Thus, overall the Company recovered its cost of production of granite blocks during the period under review. However, audit analysis revealed that in 5 to 10 departmentally operated and 51 RA/RCSA operated quarries, the Company sold granite blocks below the cost and suffered loss of Rs. 9.07 crore and Rs. 1.62 crore respectively during 2002-03 to 2006-07.

The reasons for steep shortfall in sales during 2006-07, as analysed by Audit, were as under:

- The tender for 2006-07 was postponed to June 2006 due to general elections held in May 2006 and could be finalised only in August 2006.
- The sales could not be effected in five quarries[♣] as the Government Order for renewal of the lease for these quarries was not obtained in time. This hampered the sales valued at Rs. 2.91 crore as on March 2007.
- The RCSAs had not achieved the committed sales quantity of 4,240 CBM valued at Rs. 8.59 crore on account of non-marketability of the products. Consequently, the Company suffered revenue loss of Rs. 4.82 crore during.2002-03 to 2006-07.
- Material worth Rs. 80 lakh could not be sold due to non-approval of the mining plans in respect of Sunjalnatham and Chendarapalli quarries as on March 2007.

Management of the sales contracts

2.1.33 The terms and conditions of the Global tenders floated by the Company *inter alia,* stipulate that:

- the successful tenderers would remit SD of Rupees two lakh and a sum of Rupees one lakh as advance within 30 days from the date of award of the sale for each quarry.
- in case of failure on the part of the successful tenderer to enter into an agreement, penalty of Rupees one lakh was leviable besides forfeiture of the earnest money deposit.
- the successful tenderers would furnish the performance guarantee in the form of bank guarantee for a value of 10 *per cent* of the total value of contract, which would remain in force for a period extending up to six months from the expiry of the contract to enable the Company to work out its rights, if any.
- in case of breach of the contract or failure to lift the blocks finalised in the tender, the Company would invoke the bank guarantee.

The Company did not maintain data base of the bank guarantees obtained from the contractors.

Audit observed that the Company had not maintained a register/database for the bank guarantees obtained from the contractors. In the absence of such register, it was not possible to ensure in audit whether requisite bank guarantees were collected in all cases.

♣ Kaveripuram, Illipilli, T.Velur-I and II and Thandarampattu.

The Company stated (June 2008) that such register/database would be maintained henceforth.

Some of the cases of failure of the Company to enforce the contractual conditions are discussed below:

2.1.34 Rajarathinam Fireworks, the successful tenderer (May 2004) for lifting the granite blocks from Thiruthangal quarry did not remit (October 2004) the requisite SD and also did not enter into an agreement. However, the Company neither forfeited the earnest money deposit nor levied the penalty of Rupees one lakh each in terms of tender conditions.

2.1.35 Devinarayanan Exports (Private) Limited was awarded (September 2004) contract for two quarries at Udayarnatham and Sulamalai but did not lift the agreed quantity of 1,050 CBM of granite blocks. However, the Company neither forfeited the SD and nor invoked the bank guarantee resulting in loss of Rs. 28.75 lakh.

2.1.36 PRP Granites was given (August 2006) sales contract for 17 quarries. The buyer had not furnished bank guarantees towards performance guarantee as stipulated in the contract. The buyer had not lifted the committed quantity of 2,718 CBM of granite in five quarries. However, its sister concern *viz.* PRP Exports lifted a quantity of only 2,112 CBM as adhoc buyer. Though the buyer had not lifted the agreed quantity, the Company did not forfeit the SD of Rs. 10 lakh for the five quarries.

The Company stated (July 2008) that though the sister concern had not lifted 75 *per cent* of the quantity produced in each quarry, it lifted 75 *per cent* of the blocks produced in all the quarries, on behalf of the original buyer. The reply is not acceptable as the agreement condition stipulated lifting of minimum 75 *per cent* of granite in each quarry. As such the SD should have been forfeited in respect of the five quarries, where agreed quantity was not lifted.

As regards cases mentioned in Paragraph 2.1.34 and 2.1.35 above, the Company stated (June 2008) that as the buyers had not performed the tender conditions, major left over stock was sold to other spot buyers and hence no penalty was levied. The fact remains that penalties were not levied for contractual violations.

Rejection of granite blocks by the buyers

Granite blocks valued at Rs. 27.96 crore were rejected by the buyers.

2.1.37 According to the tender conditions, the buyers have to visit and assess the quarry and quote with reference to the quarry conditions, which is binding on the buyers. Subsequent claim on colour variation *etc.*, was not acceptable as a cause for rejection. Audit observed that the buyers rejected the blocks due to colour variation *etc.*, over a period of time resulting in accumulation of stock of 24,704 CBMs of granite blocks valued at Rs. 27.96 crore as of March 2007. These rejected blocks had not been disposed off so far (August 2008).

Granite cutting and polishing unit, Manali

2.1.38 The granite cutting and polishing unit was set up at Manali in 1986 as a 'export oriented unit' at a cost of Rs. 6.39 crore with an installed capacity of 34,710 square metre of processed granite *per annum*.

Production performance

2.1.39 The details of production target, actual production and percentage of the actual production to the targeted production for the year 2002-03 to 2006-07 are given below:

(Quantity in square metre)

Year	Target	Actual	Percentage of actual to target
2002-03	20,600	13,903	67
2003-04	27,500	19,561	71
2004-05	27,500	19,299	70
2005-06	23,000	21,253	92
2006-07	26,000	12,860	49

Audit noticed that the targets were fixed with reference to the saleable quantity. Even these targets could not be achieved by the Company. Consequently, the Company suffered operating losses in all the five years aggregating to Rs. 5.42 crore as detailed below:

(Rupees in crore)

Sl. No.	Particulars	2002-03	2003-04	2004-05	2005-06	2006-07
1.	Operating income	2.19	3.94	4.88	4.97	3.97
2.	Operating expenditure	4.19	5.17	5.48	5.05	5.48
3.	Operating loss (1-2)	2.00	1.23	0.60	0.08	1.51

The reasons for losses, as analysed by Audit, were as under:

- High cost of production due to ageing of machinery.
- Non-modernisation of the unit.
- Non-acceptability of the products in the market as the Company had not obtained ISO certification.
- Absence of demand for monument granite blocks.

2.1.40 The Company could sell only 38 to 93 *per cent* of the targeted sales resulting in accumulation of stock valued at Rs. 1.66 crore at the end of March 2007. As analysed in audit, reasons for poor sales were attributable to uncompetitive price, polishing not being as per international standards, inability of the Company to produce bigger size slabs and lack of raw blocks suitable to produce building slabs in marketable pattern.

Performance of the Tiles Plant at Madhepalli

2.1.41 The Company set up (February 1994) a granite tile plant at a cost of Rs. 5.90 crore at Madhepalli, with a view to export 'value added products' and to make use of the rejected granite blocks. As there was shortfall in production, the Company modernised the unit by adding cross cutting machinery (June 2000) and an imported multi-blade cutter (December 2002) at a total cost of Rs. 2.70 crore.

Despite modernisation, the unit continued incurring losses from 2002-03 to 2006-07. However, the losses reduced from Rs. 1.16 crore in 2002-03 to Rs. 19.69 lakh in 2004-05 as a result of modernisation and again increased to Rs. 1.47 crore in 2006-07 due to problem in polishing which was not up to the international standards. As a result, the Company was forced to sell the export rejects in domestic market at a loss of Rs. 1.67 crore[#] during September 2003 to October 2007.

The Company accepted (July 2008) the audit observation and stated that efforts were being made to produce thick slabs which would ensure more sales turnover and minimise rejections.

Performance of the Vermiculite Mine

2.1.42 An area of 23.72 hectares of land in the North Arcot District had been reserved (October 1986) to the Company for exploitation of the Vermiculite mineral reserve. The Company estimated a total reserve of 1,62,058 MT and mined 23,950 MT of the mineral up to March 2003.

Audit observed that during the period under review, the unit could not achieve the targeted production and sales due to poor demand. The mine was having a stock of 4,174 MT of raw ore valued at Rs. 92.59 lakh as on 31 March 2007, which accumulated over a period of ten years and was lying in damaged condition due to improper storage.

It was also noticed that the unit had not revised the ex-mining selling price of Vermiculite varying from Rs. 2,070 to Rs. 2,300 per MT based on the cost of production or the rates fixed by the Indian Bureau of Mines (IBM) (Rs. 2,927 per MT). The last revision was made in April 2001 and there were no reasons available on record for fixation of the price below the price level of IBM.

The Company stated (July 2008) that the stock would be liquidated in due course.

3,34,058 Sq.ft. X (export sale value of Rs.108 per Sq.ft. – domestic sale value of Rs.58 per Sq.ft.).

Pollution Control

2.1.43 Tamil Nadu Pollution Control Board (TNPCB) monitors pollution control in all the quarries/mines of the Company. The consent of TNPCB is mandatory under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974. Granite Conservation and Development Rules (GCDR), 1999 also require the mining companies to obtain water and air pollution clearance from TNPCB and to keep the pollution levels of the mines within the limits.

In 15 out of 17 quarries, the Company did not obtain clearance from the Tamil Nadu Pollution Control Board.

A test check of records of 17 quarries revealed that the Company had obtained TNPCB clearance in respect of two quarries only that too after the intervention of Court as discussed below:

2.1.44 One of the villagers filed (April 2006) a writ petition in the High court seeking direction of the court to quash quarrying in Veeranam alleging spoiling of the lake of the village besides polluting the area. An Expert committee formed by the Court concluded that the debris were thrown all around the bund in the lake and needed to be removed in a proper manner to the lease hold area. The rectification work was carried (October 2007) out at a cost of Rs. 6.10 lakh after obtaining permission from TNPCB. Audit observed that wastes were allowed to be dumped near the lake by the labour contractor due to lack of supervision by the Divisional Officers. This resulted in Public litigation and consequent stoppage of production for 13 months from April 2006 to April 2007. However, the work had not been resumed so far due to other formalities (October 2008).

2.1.45 A public interest litigation petition was filed (September 2003) by villagers of Kunnam alleging that the riverbed, road *etc*., were affected by the mining operations carried out at Kunnam. According to the report submitted by the Advocate Commissioner appointed by the Court, the quarrying operations were being carried out without consent from TNPCB. On being pointed out, the Company obtained consent of TNPCB for operating the quarry in December 2007. Thus, the failure to obtain consent from TNPCB before operating the quarry resulted in avoidable litigation.

In respect of the remaining 15 quarries[♣] checked by Audit, the Company had applied for the clearance from TNPCB in February 2006; the approvals were still awaited (October 2008).

According to the mining plans for 15 quarries (September 2002), the Company should establish environmental monitoring cell to monitor the air and water pollution. This had not been complied with so far (October 2008) with the

♣ 1.Olagalapadi 2.Appunaickenpalayam 3.Sengunam 4.Thandrampattu 5.T.Velur 6.Eraiyur 7.Sathanur 8.Velanandal 9.Kunnam 9/6 10.Thiruvakkarai (Main) 11.Udaiyarnatham 12.Siruvalai 13.Kunnam 138/2 14.Kunnam 29/3 15.Perumbakkam.

result, the renewal of the mining lease was pending with the Government. Pending Government approval, the mines were being operated.

The Company stated (September 2008) that efforts were being taken to sort out the issue.

Conclusion

The Company could not achieve the targeted production and sales in respect of its major activity *viz.*, mining of granite resulting in loss of revenue mainly due to its failure to surrender the non-operated quarries, selling the granite below cost of production besides non-achievement of the committed targets of production and sales by the agents. The deployment of statutory staff was inadequate, as against the requirement of 225 personnel the men-in-position were only 87. The contract management of the Company was poor as the penal clauses of the contract like forfeiture of the Security Deposit and levy of Liquidated Damages were not enforced on the defaulting Raising Agents and Raising-cum-Sales Agents in 25 cases out of 29 cases test checked. The Company continued to pay dead rent in respect of non-operated quarries. The Company had not obtained the clearance from Tamil Nadu Pollution Control Board in respect of 15 quarries out of 17 quarries test checked.

Recommendations

The Company may consider to:

- **effectively pursue with the concerned authorities to obtain approval for the mining plans which were rejected earlier so as to operate the quarries and dispose of the materials already produced;**
- **enforce the contractual terms and conditions with regard to security deposit and penalty on the Raising Agents/Raising-cum-Sales Agents/buyers so as to act as a deterrent against non-performance of the commitments; and**
- **obtain the clearance of Pollution Control Board and put in place an environment friendly system of operation in respect of all the quarries.**

The matter was reported to the Government in July 2008; their reply was awaited (October 2008).

2.2 Tamil Nadu Cements Corporation Limited

Performance of cement plants

Highlights

The cost of production of cement in Alangulam plant was higher than that of Ariyalur plant and the difference remained in the range of Rs. 300 to Rs. 969 per MT during 2003-04 to 2007-08. This was mainly due to high cost of mining, adoption of outdated "wet process" and delay in modernisation.

(Paragraph 2.2.12)

During the five years from 2003-04 to 2007-08, there was production loss of Rs. 46.80 crore in the Alangulam and Ariyalur cement plants due to controllable factors like non-availability of gypsum, want of orders, procedural delay, want of additives and process problems.

(Paragraph 2.2.14)

There was excess consumption of clinkers resulting in avoidable expenditure of Rs. 25.69 crore. Similarly, the consumption of electricity (value: Rs. 13.18 crore) and coal (value: Rs. 19.00 crore) was over and above the norms fixed by the Company during the period of review.

(Paragraphs 2.2.15, 2.2.16 and 2.2.17)

Incorrect policy of the Company to fix the price of cement for sale in the open market at the rates lower than the market rates led to a loss of Rs. 10.18 crore during 2003-04 to 2006-07.

(Paragraph 2.2.21)

The Company failed to recover Rs. 21.35 crore from the District Rural Development Agencies due to non-pursuance of its claim for the differential cost of cement supplied.

(Paragraph 2.2.22)

Introduction

2.2.1 The Tamil Nadu Cements Corporation Limited (Company) incorporated in February 1976, has cement factories at Alangulam and Ariyalur, Asbestos Sheet Unit at Alangulam and Stoneware Pipe Unit at Vridhachalam. The Company is engaged in the manufacture and sale of cement, asbestos sheets and stoneware pipes.

The Management of the Company is vested in a Board of Directors (BOD) consisting of nine directors including the Chairman and Managing Director (CMD). For day-to-day management of the Company, the CMD is assisted by the General Manager (Marketing), Deputy General Manager (Technical) and three Managers in Personnel, Finance and Material departments. Each of the cement plant is managed by a Deputy General Manager (Operation) and the asbestos and the stoneware pipe units are managed by the Deputy General Managers.

The performance of the Company was last reviewed and included in the Report of the Comptroller and Auditor General of India for the year ended 31 March 2001 (Commercial) - Government of Tamil Nadu. However, this review had not been discussed by the Committee on Public Undertakings (COPU) so far (October 2008).

Scope of Audit

2.2.2 During the earlier review, Audit had observed that the Company was incurring continuous losses from 1998-99 onwards mainly for want of modernisation of the Alangulam cement plant, resulting in high cost of production and inability of the Company to develop marketing strategy to compete with the competitors. The cement industry in the State had witnessed sizeable growth in the volume of cement production, which increased from 117 lakh MT in 2002-03 to 179 lakh MT in 2007-08. But the Company's share of production in the State declined from 6.75 to 3.75 *per cent* during the same period due to shortfall in production. Therefore, the present performance audit was taken up confining to the functioning of the cement plants of the Company at Alangulam and Ariyalur to ascertain the reasons for their poor performance. The review was conducted between October 2007 and March 2008 covering the performance of the cement plants during the period 2003-04 to 2007-08.

Audit objectives

2.2.3 The performance review was conducted with a view to ascertain whether:

- The production of cement was carried out economically and efficiently;
- The sale price of cement covered the cost of production; and

- The pollution control norms were complied with by the Company.

Audit criteria

2.2.4 The following criteria were used for assessing the performance of the cement plants:

- Provisions of Metaliferous Mines Regulation Act, 1961 and Regulations framed thereunder dealing with open cast mining of limestone;
- Targets in respect of capacity utilisation of kilns and cement mills contained in the annual plan and norms laid down by the Company in respect of consumption of raw material, fuel, *etc*;
- Terms of agreements for the purchase of additives and coal for production of cement;
- Industry norms for production of cement;
- Marketing and price fixation policy of the Company; and
- Pollution norms fixed by the Pollution Control Board.

Audit methodology

2.2.5 Audit adopted the following mix of methodology for conducting the performance audit.

(a) Examination of (i) minutes and agenda notes of the meetings of the BOD of the Company (ii) 426 out of 607 purchase files (value: Rs. 18.24 crore) (iii) budgets, costing and stores records (iv) files on price fixation (v) 85 out of 110 tenders floated by the Company for procurement of consumables (vi) Management Information System reports (vii) records relating to consumption of raw materials, power and coal for production of cement and

(b) interaction with the management and issue of audit enquiries.

Audit findings

The Audit findings as a result of performance audit were reported (July 2008) to the Management/Government and discussed in the meeting of Audit Review Committee on Public Sector Enterprises held on 1 September 2008. The Special Secretary to Government, Industries Department and the CMD of the Company attended the meeting. The views expressed by the Management have been taken into consideration while finalising the performance review. The Audit findings are discussed in the succeeding paragraphs.

Financial position and working results

2.2.6 The financial position and working results of the Company up to 2007-08 are given in **Annexures-12** and **13.**

An analysis of the financial position indicated that the entire paid up capital of Rs. 37.42 crore was eroded by the accumulated loss of Rs. 45.86 crore as on 31 March 2008 and the net worth had become negative. The Company was declared as a sick company by the Board for Industrial and Financial Reconstruction (BIFR) in June 2003 and the Industrial Development Bank of India was appointed as an implementing agency for rehabilitation of the Company. The Company had submitted (May 2008) a rehabilitation proposal to BIFR and the same was under consideration of BIFR.

An analysis of the working results indicated that both the cement plants contributed for an average of 91 *per cent* of the income (Rs. 804 crore) and 89 *per cent* of expenditure (Rs. 706 crore) of the Company. The Company which was incurring losses up to 2005-06 earned profit from 2006-07 onwards due to revision of the price of cement sold to the Government departments. Audit noticed that the accumulated losses were attributable to the Company's delayed action in closing the Asbestos Pipe Unit at Mayanur and deficient performances of the cement plants as discussed in the succeeding paragraphs.

Process of cement production

2.2.7 The limestone extracted from the quarries is dumped into the crusher for crushing. The crushed limestone is fed into the raw mill along with either clay or sand to obtain the limestone powder containing 76 *per cent* carbon. This process is called dry process which is adopted in the Ariyalur cement plant. Under the wet process adopted in the Alangulam plant, the crushed limestone is fed into the slurry mill and water is added up to 33 *per cent* to produce the slurry.

The slurry obtained in the slurry mill in the wet process or the raw meal[♣] obtained in the dry process is fed into the kiln, where it is burnt with powdered coal and is transformed into hot clinkers. The clinkers pass through cooling equipment to remove the heat.

The clinkers (95 *per cent*) along with gypsum (5 *per cent*) are conveyed through feeders into the cement mill to grind them as Ordinary Portland Cement (OPC). For production of Pozzalanic Portland Cement (PPC), fly ash and slag to the extent of 15 to 35 *per cent* are added to the clinkers and gypsum at the grinding stage. The cement so obtained is transported to the storage silos and then to the packing unit, where it is packed in 50 Kg bags.

The flow chart depicting the process of cement production is given in **Annexure-14**.

Mining of limestone

2.2.8 Availability of good quality limestone is the basic requirement for production of quality cement at minimum cost. The Company had already taken over (1972/1980) 1,222 hectares of land in Alangulam and 986 hectares

♣ Limestone powder.

in Ariyalur. These lands have a potential reserve of 207 lakh MT and 303 lakh MT of limestone respectively.

Unfruitful investment

2.2.9 The Company deposited (November 1996 to December 1999) a sum of Rs. 4.61 crore with the Land Acquisition Officer and acquired 490 hectares of land for mining in Ariyalur. However, the Company could not take possession of the land as 194 hectares had been acquired by other cement manufacturers. The matter remained under dispute and the Supreme Court of India banned (December 2006) the mining operation in the area. Hence, the mines could not be exploited by the Company and the investment of Rs. 4.61 crore remained unfruitful since 1999.

Fixation of limestone requirement

2.2.10 The requirement of crushed limestone to meet the installed capacity of cement mills at Alangulam and Ariyalur was six• lakh tonnes and 8.71 lakh tonnes *per annum* respectively. In respect of Ariyalur plant, the Company fixed annual target lower than its installed capacity (except 2006-07) taking into account its budgeted production of clinker. The requirement of the Alangulam plant was reduced (August 2002) to three lakh tonnes *per annum* due to stoppage of one of the two kilns, which was damaged beyond repairable condition. Audit observed that the Company budgeted its limestone requirement for the Alangulam plant as 1.83 lakh MT in 2003-04 to 2.10 lakh MT in 2006-07, which was again reduced to 1.82 lakh MT in 2007-08 as is evident from the following table.

(In lakh MT)

Year	Alangulam			Ariyalur		
	Budgeted	Actual	Percentage of actual to budget	Budgeted	Actual	Percentage of actual to budget
2003-04	1.83	2.09	114	8.04	7.28	91
2004-05	1.85	1.73	94	7.65	7.98	104
2005-06	1.83	1.85	101	8.00	7.02	88
2006-07	2.10	1.65	79	9.00	8.11	90
2007-08	1.82	1.37	75	8.00	7.33	92

Audit scrutiny of records for shortfall in extraction of limestone revealed that:

- In the Alangulam plant, fixation of lower target was due to non-availability of sweetner limestone within the vicinity of the cement plant and incidence of high overburden (OB) in the form of black stone, *etc*., by more than 100 *per cent* of the limestone extracted up to 2004-05. However, during 2005-06 and 2006-07, the percentage of OB was reduced to 45 and 31 *per cent* respectively, by adoption of deep mining and narrow mining methods. But the Company could not

• For producing one MT of cement, 1.52 MT of limestone is required.

High cost of limestone at Alangulam as a result of high overburden affected the overall profit of the Company by Rs. 8.33 crore.

continue these mining methods as the same were objected to by the Mining Department of Government of India. The higher cost of limestone produced at Alangulam as a result of high OB increased the cost of production by Rs. 141 per MT during the last five years up to 2007-08 and affected the overall profit of the Company by Rs. 8.33 crore during the same period.

- The Company ordered closure (August 2002) of the Pandapuli mine without exploring the availability of quality limestone from other mines as among the three[∝] mines in Alangulam, only the limestone of Pandapuli had more carbon content of 78 *per cent*. This is blended with the limestone of other mines in the ratio of 60:40 to obtain the required carbon content of 76 *per cent* for production of cement. Despite this, the Company ordered closure of the Pandapuli mine due to locational disadvantage. Subsequently, the mine was reopened for use only in March 2007. Consequently, during the closure of the said mine, the Alangulam plant suffered for want of quality limestone and had to depend on the Ariyalur plant for clinker. Had the Company continued the blending of limestone in 60:40 ratio without closure of the Pandapuli mine, it would have saved an amount of Rs. 1.05 crore during 2003-04 to 2006-07.
- In the meanwhile, the kiln in the Alangulam plant remained closed for 595 hours during September 2006 to December 2006 for want of quality limestone due to delay in reopening of the Pandapuli mine. The production loss on this account worked out to 15,619 MT valued at Rs. 3.18 crore.
- As regards short fall of 12 *per cent* during 2005-06 in Ariyalur plant, the excavation could not be carried out due to heavy rainfall in November/December 2005.

Production performance

2.2.11 Against the installed capacity of four lakh MT and five lakh MT of production of cement *per annum* at the Alangulam plant and Ariyalur plant respectively, the actual production and the shortfall during the five years ended 31 March 2008 was as under:

(In lakh MT)

Year	Alangulam plant			Ariyalur plant		
	Budgeted quantity	Production	Shortfall	Budgeted quantity	Production	Shortfall
2003-04	3.02	2.67	0.35 (12)	5.98	5.92	0.06 (1)
2004-05	2.80	2.36	0.44 (16)	5.80	5.70	0.10 (2)
2005-06	2.75	2.58	0.17 (6)	5.90	5.27	0.63 (11)

∝ Horse shoe, Alangulam and Pandapuli mines.

Year	Alangulam plant			Ariyalur plant		
	Budgeted quantity	Production	Shortfall	Budgeted quantity	Production	Shortfall
2006-07	2.75	2.00	0.75 (27)	5.90	5.33	0.57 (10)
2007-08	2.50	1.39	1.11 (44)	5.50	5.33	0.17 (3)
TOTAL	**13.82**	**11.00**	**2.82 (20)**	**29.08**	**27.55**	**1.53 (5)**

(Figures in bracket indicate percentage)

It could be seen from the table that:

- While the performance of the Ariyalur plant was over and above the installed capacity of 5 lakh MT, the performance of the Alangulam plant was far below the installed capacity and even lower than its budgeted quantity. The shortfall in production in the Alangulam plant was mainly due to non-operation of one of the two kilns from August 2002 and the second kiln also could not achieve its full capacity due to its ageing and frequent stoppages.
- To increase the clinker production, the Company took up partial rehabilitation and incurred (December 2007) an expenditure of Rs. 2.00 crore on change in kiln shell and carrying out repairs in Electro Static Precipitator and on dumpers, *etc*. Audit noticed that in spite of carrying out these works, there was no improvement in clinker production. Thus, the partial rehabilitation remained unfruitful.
- The Company did not take up its modernisation plan to replace the non-working kiln as discussed in detail in Paragraph 2.2.23.

Cost of production

2.2.12 The year-wise details of cost of production of cement for both the plants are indicated in the **Annexure-15.** It could be seen from the Annexure that the cost of production of cement in the Alangulam plant was higher than that of Ariyalur plant and the difference remained in the range of Rs. 300 per MT (2005-06) and Rs. 969 per MT (2007-08). This was mainly due to high cost of mining and adoption of "wet process" of cement production. The other reasons for the high cost of production, as analysed by audit, were:

- delay in modernisation of the Alangulam cement plant (Paragraph 2.2.23).
- adoption of the conventional wet process in production of cement against the cheaper (up to 20 *per cent*) dry process being adopted by all the cement plants including the Company's own plant at Ariyalur.
- excess consumption of clinker (Paragraph 2.2.15).
- shortfall in targeted production of PPC (Paragraph 2.2.18).
- excess consumption of fuel (Paragraph 2.2.16 and 2.2.17).

Performance of the kilns

2.2.13 The Company fixed the budgeted quantity of clinker production lower than the installed capacity in the Alangulam plant by taking into account the derated capacity of machinery and the attendant problems due to ageing of the lone functional kiln. The fixation of lower budgeted quantity for the kiln for Ariyalur plant was due to revision of the average number of working days as 300 against 330 days in a year on account of increased maintenance requirement for the aged machinery. Further, the norm for consumption of limestone was fixed at 1.52 MT per production of one MT of clinker and the norms fixed for carrying out maintenance was fixed as 35 days.

The details of production of clinkers by the kilns at Alangulam and Ariyalur for the last five years were as under:

(In lakh MT)

Year	Alangulam (one kiln) (Installed capacity:1.98 lakh MT)			Ariyalur (two kilns) (Installed capacity:4.95 lakh MT)		
	Budgeted quantity	Production	Percentage of utili-sation	Budgeted quantity	Production	Percentage of utili-sation
2003-04	1.35	1.49	110	4.80	4.55	95
2004-05	1.35	1.24	92	4.50	4.41	98
2005-06	1.35	1.34	99	4.50	4.44	99
2006-07	1.35	1.14	84	4.50	4.10	91
2007-08	1.35	0.90	67	4.20	4.30	102°

Audit observed that:

- While Alangulam plant was able to achieve the norms fixed for consumption of limestone, the Ariyalur plant consumed 86,693 MT of excess limestone (value: Rs. 1.29 crore) against the production of 21.80 lakh MT of clinker during 2003-08. The excess consumption was due to availability of sediment mixed limestone available in the quarries attached to this plant. This problem persisted since long and was yet to be resolved by the management.
- The reduction in working days from 330 to 300 days for Ariyalur plant was not justified since the Company utilised an average of 19 days for Kiln-I and 12 days for Kiln-II for carrying out the maintenance work including the special maintenance instead of the norm of 35 days. Since the production cost of clinker in the Alangulam plant was higher than the cost of clinker produced at Ariyalur, the Company should have planned and produced clinker at Ariyalur plant equivalent to 330 days of production every year and transported the excess quantity over

° Increased over previous year as a result of reduction in budgeted quantity on account of major maintenance, which was not carried out.

and above the actual requirement at Ariyalur to Alangulam. Thereby, the Company could have saved an amount of Rs. 13.66 crore≈.

The Company lost 2,422 production hours and revenue of Rs. 13.53 crore for want of limestone, fine coal and process problem.

- These plants had lost 2,422 production hours (Alangulam: 926 hours and Ariyalur: 1,496 hours) during 2003-04 to 2007-08 due to controllable factors like want of limestone, fine coal and process problem. Thereby, the Company lost the opportunity of earning revenue to the extent of Rs. 13.53 crore♠.

The Company stated (August 2008) that in respect of the Alangulam plant, Kiln-I was stopped in August 2002 as major portion of the kiln shell was damaged and de-shaped beyond repairable condition and Kiln-II was running at the derated capacity due to ageing of machinery and this forced the Company to reduce the budgeted production to 1.35 lakh MT *per annum*. The Company admitted that in Ariyalur plant frequent stoppages and breakdowns were on account of not carrying out adequate maintenance for the entire length of kiln. The Company further stated that to avoid wasteful expenditure involved in transportation of clinker the same was not transported to Alangulam.

Had the Company carried out the annual maintenance as per National Council for Building Maintenance (NCBM) norm, the frequent damages to the kilns could have been minimised by the Company. The reply, further, did not take into account the fact that as the cost of clinker produced and transported from Ariyalur was cheaper than the cost of clinker produced at Alangulam, the Company could have produced clinker up to 100 *per cent* capacity at Ariyalur and transported the extra clinker to Alangulam to reduce the overall cost of production of the Alangulam plant.

Performance of the cement mills

Both the cement plants lost 2.35 lakh MT of production valued at Rs. 46.80 crore due to controllable factors.

2.2.14 The production performance of both the plants had been discussed under Paragraph 2.2.11. An analysis of the performance of the cement mills of the two plants indicated that there was production loss in the cement mills during the last five years ended 2007-08 aggregating to 1,79,426 MT in the Alangulam plant and 55,616 MT in the Ariyalur plant valued at Rs. 46.80 crore≠ due to controllable factors like want of gypsum, want of orders, procedural delay, hichrome *etc*., (Alangulam plant) and want of additives and process problem (Ariyalur plant).

A detailed analysis by Audit revealed the following:

- The Alangulam plant lost 3,817 hours due to lack of orders/silo problem, which resulted in loss of 1,13,488 MT valued at Rs. 20.79 crore during 2003-04 to 2007-08.

≈ The difference between the cost of production and transportation of clinker from Ariyalur to Alangulam and the cost of production of clinker in the Alangulam plant.

♠ Worked out at the rate of average sales realisation of cement.

≠ Worked out on the basis of average realisation per MT.

- The Alangulam plant lost 2,101 hours equivalent to 50,048 MT of cement production (value: Rs. 11.95 crore) due to non-availability of gypsum and hichrome balls and 454 hours equivalent to 15,890 MT (value: Rs. 2.52 crore) due to empty hopper resulting from non-availability of adequate clinker to store in the hopper for which the Company should have taken action well in time.
- The Ariyalur plant lost 293 production hours equivalent to 22,661 MT (value: Rs. 4.26 crore) of cement for want of additives such as fly ash and gypsum during 2005-06. The Company should have taken advance action to procure these items.

The Company admitted (August 2008) that in the Alangulam plant, the production loss due to hopper empty and non-availability of gypsum was on account of lack of facility for automatic feeding of raw materials. The Company admitted that in Ariyalur plant the production loss was due to lack of fly ash. Thus, the Company did not synchronise the activities so as to avoid loss of production.

Excess consumption of clinker

2.2.15 The Company fixed norms for consumption of clinker and fly ash for production of cement every year on the basis of previous year's consumption as detailed below:

ALANGULAM **(In *per cent*)**

Particulars	2003-04	2004-05	2005-06	2006-07	2007-08
OPC cement					
Clinker	75	75	75	75	75
Gypsum	5	5	5	5	5
Fly ash	10	10	10	10	10
Slag	10	10	10	10	10
PPC cement					
Clinker	57	57	57	57	57
Gypsum	5	5	5	5	5
Fly ash	25	25	25	25	25
Slag	13	13	13	13	13

ARIYALUR **(In per cent)**

Particulars	2003-04	2004-05	2005-06	2006-07	2007-08
OPC cement					
Clinker	67	67	75	67	67
Gypsum	5	5	5	5	5
Fly ash	15	15	12	15	15
Slag	13	13	8	13	13

Particulars	2003-04	2004-05	2005-06	2006-07	2007-08
PPC cement					
Clinker	57	57	62.5	60	60
Gypsum	5	5	5	5	5
Fly ash	30	30	25	27	27
Slag	8	8	7.5	8	8

Audit observed that:

- In Alangulam plant, the norm for consumption of clinker and fly ash remained constant in all the years, but the same was revised in Ariyalur from 2005-06 onwards without any justification.

Excess use of clinker instead of cheaper fly ash resulted in extra expenditure of Rs. 25.69 crore.

- Against this norm, the actual consumption of clinker was always higher in both the plants except in 2003-04 in respect of Alangulam. But the actual consumption of fly ash was lower than the norms indicating absence of control in consumption of the clinker and fly ash. As the fly ash is added to the clinker as a measure of cost reduction in producing cement, excessive use of clinker at the cost of fly ash resulted in extra expenditure of Rs. 25.69 crore during the five years up to 2007-08 as indicated in **Annexure-16**. The Company had neither analysed the reasons for such excess consumption nor took corrective action by fixing responsibilities, *etc*.

The Company stated (April 2008) that extra consumption of clinker was because of shortage of fly ash in the plant. The reply is not convincing as fly ash was abundantly available in the thermal power plants and the Company could have procured the same by taking timely action.

Excess consumption of fuels

Electricity

2.2.16 According to the norms of NCBM, electricity was to be consumed at minimum of 78 KWH (unit) in the Alangulam plant and at 92 units in the Ariyalur plant per MT of cement production. The variation in the norm for the Alangulam and Ariyalur plants was due to adoption of different process of production. The Company fixed its own norms ranging between 92 to 99 units per MT in respect of Alangulam plant and 97 to 99 units per MT for Ariyalur plant for production of cement during the five years up to 2007-08 as indicated in the **Annexure-17.**

Consumption of electricity over and above the norm fixed by the Company was Rs. 13.18 crore.

Audit observed that the actual consumption of electricity in both the cement plants was higher than the norms fixed by the Company by 10.26 units and 9.40 units (average) in Alangulam and Ariyalur respectively, resulting in extra expenditure of Rs. 13.18 crore (Rs. 4.56 crore in the Alangulam plant and Rs. 8.62 crore in the Ariyalur plant) during the last five years up to 2007-08.

Audit scrutiny further revealed that excess consumption of electricity was due to frequent power tripping, higher consumption of clinker in the mill, lower output of cement in the mill, idle running of crusher, inadequate quantity of grinding media, higher volume of OPC grinding, *etc*. However, these problems could have been avoided had the plants implemented energy saving measures and synchronised their activities to avoid idleness of the mills/crusher, *etc*.

The Company stated (August 2008) that proposals for energy saving measures at an estimated cost of Rs. 36 crore could not be implemented at both the plants due to paucity of funds.

Coal

2.2.17 The Company had entered into an annual contract with Singareni Collieries Limited (SCL) for the procurement of its annual requirement of 'C' grade coal for its plants with a specific calorific value of 4,940 Kilo Calories (Kcal) to 5,600 Kcal, as specified in the Fuel Supply Agreement (FSA). The Company had fixed specific norms for consumption of coal for production of clinker for both the plants. While the Company fixed 18 *per cent* of clinker up to 2006-07 and 21.5 *per cent* of clinker for 2007-08 for Ariyalur plant, it fixed the same as 30 *per cent* of clinker for Alangulam plant due to different process adopted by both the plants.

Consumption of coal exceeded the norm by Rs. 19.00 crore

Audit scrutiny revealed that as against the norms fixed:

- The Ariyalur plant consumed 0.72 lakh MT of coal in excess during the period 2003-04 to 2007-08 valued at Rs. 17.02 crore.
- The Alangulam plant consumed 7,234 MT of coal in excess during the period 2003-04 to 2007-08 valued at Rs. 1.98 crore.

The overall loss on account of excess consumption of coal in these two plants is detailed in **Annexure-18.**

Audit further noticed that the excess consumption in both the plants was due to receipt and consumption of 2.83 lakh MT of 'D' grade coal along with 3.96 lakh MT of 'C' grade coal. However, the Company should have received 'C' grade coal from SCL. Though the Company appointed a forwarding agent to ensure the despatch of designated grade of coal and to collect the differential amount from SCL on account of grade slippage, it did not fix any responsibility so far on the agent for non-collection of differential amount of Rs. 4.87 crore.

The Company stated (August 2008) that frequent stoppage of kilns of both the plants and receipt of coal from SCL with high ash content had caused consumption of coal in excess of the norm. The fact remains that even though the problem persisted for more than five years, the Company neither resolved the issue with SCL nor taken any action against the forwarding agent, who was primarily responsible for collecting the differential amount.

Sales and profitability

2.2.18 The cost of production and sales, sales realisation and profit/loss of the two cement plants during the five years up to 2007-08 are given below:

(Amount in Rupees)

	2003-04	2004-05	2005-06	2006-07	2007-08
Alangulam plant					
Cost of production of cement per MT	1,590	1,717	1,761	2,035	2,465
Packing cost	168	186	188	219	244
Selling overheads per MT	260	267	194	338	327
Cost of sales per MT	2,018	2,170	2,143	2,592	3,036
Average selling price per MT	1,765	1,924	1,898	2,371	2,649
Loss per MT	253	246	245	221	387
Ariyalur plant					
Cost of production of cement per MT	1,199	1,238	1,306	1,431	1,561
Packing cost	147	162	165	180	261
Selling overheads per MT	319	375	372	360	245
Cost of sales per MT	1,665	1,775	1,843	1,971	2,067
Average selling price per MT	1,711	1,818	1,878	2,242	2,592
Profit per MT	46	43	35	271	525

The Alangulam plant sustained loss due to high cost of production as discussed in Paragraph 2.2.12. The Ariyalur plant earned profit and also succeeded in improving the margin due to higher selling price.

Audit noticed that while OPC cement was meant for supply to Government departments, PPC was to be sold in the open market. The sale of PPC was more advantageous to the Company because of higher price (ranged between Rs. 117 and Rs. 288 during 2003-04 to 2007-08) prevailed in the open market than the price offered by the Government departments. However, the Company did not achieve its budgeted quantity of PPC and continued to meet the demands of the Government departments only rather than expanding its base in open market, where sales realisation would be much better. Had the Company produced and sold the budgeted quantity of PPC, it could have earned additional profit of Rs. 3.59 crore.

Failure to avail concessional excise duty

2.2.19 As per the Central Excise Department orders, the Alangulam plant was eligible for concessional excise duty of Rs. 250 per MT with effect from 1 March 2006 against the normal duty of Rs. 400 per MT as the derated capacity of the plant was within the limit prescribed (three lakh MT *per annum*) in the said orders. The duty concession was further reduced to Rs. 220 per MT with effect from 1 March 2007.

The Company did not avail the eligible concessional excise duty of Rs. 2.17 crore.

Audit noticed that:

- The Company was neither aware of such concessions until the same was intimated (September 2006) by the Central Excise consultant nor availed the concession during the year 2006. Thus, the Company could not claim the benefit of concessional duty to the extent of Rs. 1.51 crore during 2006-07 and started claiming the benefit only from March 2007.
- The claim of the Company for the dispatched quantity of 49,617 MT of cement from Alangulam plant during March 2007 to May 2007 of Rs. 66.44 lakh had been rejected by Central Excise Authorities due to failure to furnish evidence for reduction of the installed capacity.

Thus, the Company could not avail the concessional benefit of Rs. 2.17 crore.

Marketing of cement

Sales performance

2.2.20 The details of target and actual sales of the Company to the Government departments and private stockist for the last five years up to 2007-08 are given below:

(In lakh MT)

Year	Target of sales		Actual sale		Percentage of actual sales to target	
	Sales to State Government	Sales to stockist	Sales to State Government	Sales to stockist	Government	Stockists
2003-04	6.13	2.76	6.44	2.06	105	75
2004-05	6.22	2.26	6.00	1.96	96	87
2005-06	5.96	2.59	6.07	1.60	102	62
2006-07	5.79	2.74	5.30	1.89	92	69
2007-08	5.65	2.23	6.60	0.01	117	1

Audit observed that though the price differential of cement in the open market as compared to Government supplies varied from Rs. 30 to Rs. 70 per bag, the Company sold only around 21 to 26 *per cent* of its production in the open market during 2003-04 to 2006-07. There was negligible sale in the open market during 2007-08 as the demand for supply to the District Rural Development Agencies (DRDA) was higher than its total production capacity.

Fixation of the sale price lower than the market rates

2.2.21 The table below indicates the selling price fixed for the sale of cement in open market through the Company's stockists *vis-a-vis* the market price of other branded cement during the four years ended 2006-07:

(In Rupees)

Year	Average market price of cement (other than Company's cement)	Selling price of the Company	Difference
2003-04	156	134	22
2004-05	159	134	25
2005-06	158	135	23
2006-07	190	165	25

The Company lost Rs. 10.18 crore due to fixing the selling price below the market price.

Thus, the price of the Company's cement sold to the stockists was fixed always lower than the market price on the plea that the Company's cement was to be made available to the general public at affordable prices. However, the decision to sell cement in the open market at the lower rates was not justified in the best financial interest of the Company. Even after considering the various discounts allowed by the other manufacturers, the net difference in price ranged between Rupees eight and ten per bag and the total impact was Rs. 10.18 crore in the last four years up to 2006-07.

The Company stated (August 2008) that in case the price of its cement was increased without sales promotion strategy, the flow of orders to the Company would come down. However, by its own admission, the stockists did not pass on the benefit of lower price to the consumers at large. Thus, there was ample scope to raise prices.

Non-recovery of the differential cost from District Rural Development Agencies

2.2.22 The Company was participating in the tenders floated by various DRDA and supplied cement at the agreed tender rates. In accordance with the Tamil Nadu Transparency in Tenders Act, 1998 as amended (December 2001), DRDA were required to purchase cement from the Company at the prices fixed by the Government from time to time. The pricing committee formed by the Government of Tamil Nadu fixed (January 2002) the price of OPC cement at Rs. 156.50 per bag effective from 1 December 2001.

Audit noticed that:

- The Company supplied 5.05 lakh MT of cement during December 2001 to December 2002 at the revised rate of Rs. 156.50 per bag. But the DRDA settled the bills for the above period at the rates finalised through tender for the year 2001-02 and disallowed Rs. 21.35 crore being the differential amount.

- Even after noticing such disallowance, the Company continued further supplies to DRDA and took up the matter with the Government only in November 2003.
- The DRDA rejected (December 2005) the Company's claim on the grounds that their estimates were prepared and the recovery from the contractors were effected based on the pre-revised tender rates and the related works had already been certified as completed.

The Company failed to recover Rs. 21.35 crore from District Rural Development Agencies due to non pursuance of its claims.

- Had the Company insisted upon DRDA to pay at the revised rate before supplying subsequent quantities, it could have realised the differential cost from DRDA. Thus, failure to collect the differential cost immediately on supply of cement resulted in blocking of revenue of Rs. 21.35 crore.

The Company stated (August 2008) that after frequent persuasion, the Commissioner, Rural Development and Panchayat Raj instructed all the project officers of DRDA to reconcile the transactions pertaining to the period from April 2002 to December 2002. However, the amount was yet to be realised by the Company (October 2008).

Modernisation of the Alangulam plant

Delay in modernisation of the Alangulam plant

2.2.23 To reduce the cost of production by 20 *per cent* and pollution levels, the Company proposed to convert the process from wet to dry in Alangulam plant and the State Government approved (July 1997) the proposal at an estimated cost of Rs. 160 crore. However, the Company could not mobilise its share of contribution of Rs. 20 crore and the project was put on hold (July 1999). After a long period of inaction, the Company made another proposal (October 2007) to partially convert the existing kiln-2 from wet to dry process at an estimated cost of Rs. 82 crore and the same was approved (March 2008) by the State Government. The required funds for the project were yet to be mobilised by the Company (October 2008).

Audit scrutiny of the investment proposal submitted (March 2008) to the State Government revealed that the Company had failed to factor in the high cost of mining in the cost benefit analysis as detailed below:

- NCBM, engaged (December 2007) for updation of the data on availability of limestone reserves, had opined (April 2008) that the limestone available (207 lakh MT) in the seven mines attached to this plant could be extracted with OB of 424.04 lakh MT (ratio: 1:2.05) and hence cautioned about the high cost of mining.
- The mining operation in the other five mines could not be carried out because either they contained low grade limestone or the operations banned by the State Government.

Hence, the plant suffered from non-availability of limestone leading to high cost of mining.

The Company stated (August 2008) that the limestone reserve in these mines would cater to the requirement of their plant for a minimum of next 26 years and hence, the modernisation of the plant would be beneficial to the Company. The reply does not take into account the fact that extraction of limestone from these mines would increase the cost of mining operation and reservations have already been expressed by the Mining Department in respect of mining techniques adopted by the Company. Therefore, before taking up the modernisation of the Alangulam plant, the Company should consider all pros and cons of the proposal.

Pollution control

2.2.24 Cement industry is a highly polluting industry, as the level of pollution of air is very high in the case of cement factories. Non-compliance with the environmental regulations by the two cement plants of the Company had been brought out in the Report of the Comptroller and Auditor General of India (Commercial) for the year ended 31 March 2005. The Report was yet to be discussed (August 2008) by COPU.

Audit scrutiny revealed that:

- The Company had not yet installed and commissioned the 'online monitor' in Ariyalur plant as directed (April 2006) by TNPCB.
- It had not developed the minimum 25 *per cent* of the area as green belt as per the orders of TNPCB (April 2007) to mitigate the effect of fugitive emission around the plant.
- It had not established the Electro Static Precipitators in the clinker cooler and the silo, which were proposed (October 2007) under modernisation of Alangulam plant.

In both the plants, the pollution levels were higher by 30 to 512 *per cent* of the norms.

- Against the norm for pollution levels of 40 mg/NM3, the pollution levels in both the plants were higher by 30 to 512 *per cent* and the Company had not yet initiated any action to control the excess pollution.

The Alangulam plant management stated (May 2008) that it would be difficult to maintain the stack emission level of 40 mg/NM3, being an old plant and outdated technology. However, it is a statutory requirement to maintain the air pollution under control.

Conclusion

The cement industry in the State had witnessed a sizeable growth in production during the last five years up to 2007-08. On the other hand, the Company could not match its growth in pace with the industrial growth and its share declined from 6.75 *per cent* to 3.75 *per cent* over this period. The Company also suffered from non-availability of quality limestone at Alangulam and use of outdated "wet process" in the Alangulam plant against the "dry process" technology being followed universally. The Company did not take up the modernisation of the Alangulam plant despite the decision taken in 1997. Consequently, the positive contribution of the Ariyalur plant was pushed back by the Alangulam plant. Both the Alangulam and Ariyalur plants consumed clinkers, electricity and coal in excess of the norms. For marketing the cement, the Company continued to rely on the Government supplies ignoring the profitable open market sales. The air pollution levels were higher than the norm in both the cement plants.

Recommendations

The Company may consider to:

- **Take immediate action to implement the modernisation plan or decide otherwise of the Alangulam plant after ensuring the availability of quality limestone and economy of mining in Alangulam;**
- **Control functioning of the two cement plants by establishing a system for strict enforcement of the norms for use of clinker, fly ash, coal, power and machinery;**
- **Review the practice of selling cement in open market at the price lower than the market price; and**
- **Take appropriate steps to keep the pollution under control in both the plants.**

The matter was reported to the Government in July 2008; their reply was awaited (October 2008).