Chapter II

Performance reviews relating to Government Companies

2.1 Resources Management by Three Plantation Sector Companies

Executive Summary

India is the fourth largest rubber-producing country in the world and ranked first in productivity per hectare. About 82 per cent of the rubber planted areas and 92 per cent of natural rubber production in India are in the State of Kerala. Of the total land holdings under rubber cultivation in the state in estate sector (38645 hectares), a considerable extent (27.00 per cent) belonged to the three public sector undertakings viz. The Plantation Corporation of Kerala Limited, Kottayam (PCK); The State Farming Corporation of Kerala Limited, Punalur (SFCK) and the Rehabilitation Plantations Limited, Punalur (RPL) formed in 1962, 1972 and 1976 respectively. The total land holdings of the Companies were in the order of 15176 hectare (ha) for PCK (including cashew planted areas of 6358 ha), 2361 ha for SFCK (including cashew area of 230 ha.) and 2194 ha for RPL.

This performance Audit was conducted to assess the utilisation of resources by the three companies during the period 2004-05 to 2008-09. Norms/Standards fixed by Rubber Board and bench marks set on the basis of inter Company comparison of performance standards were adopted for evaluating the efficiency and economy of operations of the Companies.

Land Utilisation

The companies utilised 93 % (RPL), 90.19 % (PCK) and 89.41 % (SFCK) of the total landholdings available with them, for raising plantations. The rest of the areas were either used for infrastructure facilities or left as vacant patches, secondary forests etc.

The land holdings of the three Companies were not properly surveyed and demarcated and their possession was not adequately legalised to safeguard them from encroachments and to enable formulation of long term investment plans.

Plantation Management

The productivity of rubber plantations of these Companies was substantially lower than the state average productivity reported by Rubber Board. The major reason for the shortfall was the low stock of rubber yielding trees in the different estates. PCK and SFCK failed in extracting the yield to the full potential owing to shortages in the strength of tappers as well as under utilisation of available strength. RPL fared better in the matter of yield exploitation though the productivity of its labour force was not up to the mark.

Manpower Management

Supervision and control over field operations was relatively better in RPL and it was inadequate in both PCK and SFCK. PCK suffered from shortage of manpower for field supervision, inadequate controls over cost of operation and vastness of areas.

Replanting Projects

Rubber plantations over an area of 791.75 ha (12.06 per cent) in PCK and 1779.4 ha (87.20 per cent) in RPL were due for replanting. RPL undertook replanting operations in a planned manner although low yielding areas were not given due priority for early replanting. PCK, however, refrained from implementing replanting programme, in spite of the very low yield potential of its older plantations that crossed the economical period of retention.

Processing and Marketing of Natural Rubber

Processing efficiency of centrifuging factories of PCK and RPL was below the industry standards due to non modernisation of machinery. The two Companies also undertook manufacture of value added products incurring costs substantially higher than the marginal price advantage. Price realisation for natural rubber marketed by the Companies in both processed and unprocessed condition was not always matching with the optimum price levels recorded in the market.

Fund Management

Attractive market prices prevailed during the period covered in the performance audit helped the Company Managements in maintaining consistent profitability and fairly good reserves and surplus position. However, the fund management was not found to be efficient, since optimum financial advantages of investments and tax benefit schemes were not being derived by them.

Relative strengths and weaknesses

The strengths of the Companies as assessed by Audit were consistent profitability and sound financial position (for all the three Companies), easily manageable and compact areas (SFCK and RPL), predominantly high yielding rubber trees (SFCK), better infrastructure facilities (PCK and RPL) and time tested systems and practices (PCK). The weaknesses were distantly located planted areas, degradation of plantations due to clonal mixing and inadequate maintenance and upkeep during formative years (PCK), plantations that crossed the prime years of productivity (SFCK and RPL), failed expansion/diversification schemes (PCK and RPL) and inadequate internal controls over stock transfers of field crop (PCK and SFCK).

Introduction

2.1.1 Three Government Companies in the State viz, The Plantation Corporation of Kerala Limited (PCK), Kottayam, The Rehabilitation Plantations Limited (RPL), Punalur and The State Farming Corporation of Kerala Limited (SFCK), Punalur, were commonly and independently engaged in raising and development of rubber plantations and production and sale of processed natural rubber. PCK was incorporated (November 1962) in the State sector to take over the rubber plantations raised by Forest Department. RPL was formed (May 1976) in joint sector to implement a Government of India programme of rehabilitation of refugee plantation workers from Sri Lanka. SFCK, incorporated (April 1972) in State sector, was initially engaged in sugar cane cultivation in forest lands but switched over (1980) to rubber cultivation as the former activity was adjudged as unsustainable. PCK and SFCK had also raised/ taken over (1972 - 1983) cashew plantations, along with other alternate crops such as coconut, arecanut, vanilla, pepper etc. PCK had also attempted (September 2005) diversification by constructing a Tourist Resort at Adirappally and setting up (December 1989) a Rubber Wood Processing Unit at Kodumon. Both the projects did not fetch the expected returns on investment and were being operated at breakeven level without any significant growth potential. RPL, however, confined its activity to rubber cultivation. PCK and SFCK functioned under the administrative control of Agriculture Department and RPL under Labour and Rehabilitation Department of Government of Kerala. All the three Companies have ISO certification.

Present Activities

2.1.2 The Companies raised rubber plantations in forest areas allotted by Government and used the yield of field latex[1] for production of centrifuged latex[2] and by- products such as skim crepe[3], estate brown crepe[4] etc. PCK and RPL also processed scrap rubber[5] to produce crumb rubber[6] whereas SFCK disposed of scrap in unprocessed condition. The right of collection of crop from cashew estates was usually sold out by PCK and SFCK on the basis of competitive bids (tenders and auctions).

Organisational set up

2.1.3 The Board of Directors of PCK and SFCK consisted of 11 Directors each while RPL had nine Directors. The Managing Directors of all the three Companies were appointed by the State Government who were assisted by managers /officers.

As on 31 March 2009, PCK was having seven rubber estates and four cashew estates. SFCK and RPL were having only rubber estates numbering four and two respectively. Each of the estates was managed by managers/ assistant managers.

Scope of Audit

2.1.4 A horizontal review on the working of these Companies was last conducted in 1994 and findings included in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1994. The report was treated (September 2002) as discussed by the Committee on Public Undertakings.

The business and economic scenario underwent changes during subsequent years giving rise to scope for a fresh study in view of the high profit potential of rubber cultivation in the State. Greater significance is also being attached to land utilisation during recent years. The present performance review conducted between January 2009 and May 2009 covers issues of the resource management by the three Companies during the five year period 2004-09.

Audit Objectives

2.1.5 The main objective of the performance review was to examine whether the resources viz., land and other infrastructure, manpower, finance etc., were

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[1] **White or slightly yellowish opaque liquid coming out on tapping rubber tree that contained 30-40 *per cent* rubber, 55-65 *per cent* water with low percentages of sugar, protein and ash.**

[2] **Concentrated latex of more than 60 *per cent* dry rubber content separated from field latex using a centrifuging machine.**

[3] **Manufactured out of skim lump, residue of centrifuging process.**

[4] **Manufactured out of cup lump and other higher grades of coagulated latex.**

[5] **Left over quantities of field latex collected after the day of tapping in solid form**.

[6] **Processed scrap rubber of 100% Dry Rubber Content (DRC).**

utilised optimally by the three Companies. Audit was conducted to ascertain whether:

- Land and other infrastructure were utilised optimally with measurable targets;
- Processing capacities were utilised optimally;
- The performance parameters were comparable among the three Companies and with industry standards;
- The Companies exploited the profit potential in sale of natural rubber, rubber nursery plants, right of felling of rubber trees etc;
- The Companies made use of the financial assistance and expert advice available from Rubber Board, Government of India and acted upon their recommendations;
- The financial resources were optimally made use of and surplus funds gainfully utilised;
- The replanting projects prepared were efficiently implemented by the three Companies; and
- The Companies had an effective internal control/ internal audit system.

Audit Criteria

2.1.6 Audit adopted the following criteria:

- Norms fixed by Rubber Board as well as other industry norms for evaluating performance standards;
- Targets fixed by the Companies in their annual budgets;
- Statutory regulations in matters pertaining to labour recruitment, provision of amenities to workers, wage fixation etc;
- Plantation Labour Committee decisions in matters relating to fixation of wage rates;
- Daily market prices published in local newspapers for judging fairness of sales price realised; and
- Recommendations of Rubber Board in matters like clone[a] selection, formulation of replanting schemes, tapping methods etc.

[a] **Rubber trees of same characteristics and same parentage.**

Audit Methodology

2.1.7 Audit adopted the following methodology:

- Compilation and analysis of performance data available with the Companies;
- Discussion with top management regarding key issues;
- Detailed system studies in Companies;
- Interviews with management to understand field conditions;
- Collection of necessary data from Rubber Board and inter company comparisons with reference to benchmarks; and
- Review of Project Reports and related documents in respect of specific projects.

Projects and Schemes implemented

2.1.8 RPL had been implementing replanting scheme since 2001 and completed replanting in an area of 1,095.45 hectares (ha) by the year 2008-09, incurring expenditure of Rs. 21.53 crore. No major replantation schemes were under implementation in other two Companies. PCK, however, outsourced slaughter tapping over an area of 852.30 ha out of total area of 5,984.69 ha of mature plantations to private parties, collecting revenue of Rs. 12.98 crore during 2007-09.

Audit findings

Findings emerging from the performance audit review are discussed in the succeeding paragraphs:

Financial Position and Working Results

2.1.9 The financial position and working results of the three Companies for the five years up to 2008-09 are given below: (details in ***Annexures 7 and 8***).

(Rs. in crore)

Year	Paid-up capital			Turnover			Profit		
	PCK	SFCK	RPL	PCK	SFCK	RPL	PCK	SFCK	RPL
2004-05	5.57[a]	9.04[b]	3.39[c]	31.12	15.22	14.08	5.50	5.23	5.27
2005-06	5.57	9.04	3.39	44.71	21.06	17.95	2.24	8.84	6.02
2006-07	5.57	9.04	3.39	50.31	18.93	21.45	12.19	12.25	11.32
2007-08	5.57	9.04	3.39	52.58	25.10	19.08	13.87	12.77	8.73
2008-09	5.57	9.04	3.39	70.23	22.85	19.73	20.78	20.79	7.58

[a] **Fully subscribed by Government of Kerala.**
[b] **Rs. 8.43 crore held by State Government and Rs. 0.61 crore by others.**
[c] **Rs. 2.06 crore held by State Government and Rs. 1.33 crore by Government of India.**

Audit observed that:

- The working results were not comparable amongst the three Companies since different accounting treatments were followed for high value transactions such as sale of rubber trees, stock valuation etc.

- The growth in turnover was also not comparable as substantial part of the areas of RPL were under replanting from 2001 onwards, whereas the replanted areas of PCK were being progressively brought under tapping during these years. The plantations of SFCK were nearing the age of replantation, showing signs of declining productivity.

- The percentage of profitability to turnover was only 5.01 to 29.59 in PCK as against 12.19 to 64.75 in SFCK and 33.56 to 52.80 in RPL. The main reason for lower profit margin of PCK's operations was low productivity of its plantations.

Land Management

2.1.10 Particulars of land utilisation by the three Companies as of March 2009 are given below:

(Area in hectares)

Company	Gross area under lease / free hold	Land under possession as per land records of Company	Land utilised for plantations	Percentage of utilisation	Area utilised for infrastructure including vacant patches and rocky area	Area in use unidentified with the Company
PCK	15384.35	15176.64	13688.37	90.19	401.26	1087.01
SFCK	2360.78	2360.78	2110.77	89.41	250.01	-
RPL	2193.77	2193.77	2040.51	93.00	153.26	-
Total	**19938.90**	**19731.19**	**17839.65**	**90.41**	**804.53**	**1087.01**

RPL, PCK and SFCK utilised 93 *per cent*, 90.19 *per cent* and 89.41 *per cent* of area respectively under possession for raising plantations.

It could be seen from the table that the extent of land utilised for raising/maintaining plantations was 93 *per cent* in RPL, 90.19 *per cent* in PCK and 89.41 *per cent* in SFCK. Purpose-wise details of utilisation of the remaining areas were not available in all the three Companies. While PCK identified areas unsuitable for planting and that used for infrastructure creation as 2.64 *per cent* (401.26 ha) of total holdings it did not have any details of utilisation of the left over area of 7.12 *per cent* (1087.01 ha).

Deficiencies noticed in land management are given below:

- The areas under plantation in the three Companies were not independently surveyed and demarcated either before or after takeover.

- No lease deeds were executed for the holdings of PCK at the estates of Thannithode (699.35 ha), Nilambur (582.58 ha), Mannarghat (545.85 ha) and Cheemeni (1378.35 ha) and part areas to the extent of 1333.08 ha in other estates. Payment of lease rent was also in arrears in PCK since 1999, following disputes over rates applicable. There were serious contradictions

in the different orders issued by Government from time to time, fixing the rates of lease rent, which required to be removed, to enable final settlement of demands raised.

- Areas of Kasaragod estate of PCK and Chithelvetty estate of SFCK were subjected to encroachments by private parties. Companies could not undertake boundary protection measures due to the huge financial commitments involved.

Plantation Management

2.1.11 The three Companies had 17,839.65 ha of vested forest land under cultivation of rubber, cashew etc., as at the end of March 2009 as shown below:

Name of the Company	Name of Estate	Area under cultivation (Hectare) as on 31.3.09						
		Rubber		Cashew		Oil palm	Other crops	Total
		Mature	Immature	Mature	Immature			
PCK	Kodumon	1189.23	4.00				4.75	**1197.98**
	Chandanappally	1488.63	20.08	50.00				**1558.71**
	Thannithode	592.01		58.08			1.50	**651.59**
	Kallala	1115.49	51.67	277.97		142.09		**1587.22**
	Adirappally	1231.13	40.70	307.98	5.62	565.64		**2151.07**
	Nilambur	299.14		51.76	21.24		21.03	**393.17**
	Perambra	194.97	237.89	484.68	16.18		28.98	**962.70**
	Kasaragod		99.00	1248.90	842.10			**2190.00**
	Cheemeni			899.50	60.00			**959.50**
	Rajapuram			1419.43	103.00			**1522.43**
	Mannarghat			511.50			2.50	**514.00**
	Total	**6110.60**	**453.34**	**5309.80**	**1048.14**	**707.73**	**58.76**	**13688.37**
SFCK	Chithelvetty	605.95		105.35	15.00		15.00	**741.30**
	Kumaramkudy	397.01		20.00			20.00	**437.01**
	Mullumala	420.99		79.57			6.00	**506.56**
	Cherupittakavu	406.98			9.92		9.00	**425.90**
	Total	**1830.93**		**204.92**	**24.92**		**50.00**	**2110.77**
RPL	Kulathupuzha	832.00	475.89					**1307.98**
	Ayiranallur	242.27	490.35					**732.62**
	Total	**1074.27**	**966.24**					**2040.51**
Grand Total		**9015.80**	**1419.58**	**5514.72**	**1073.06**	**707.73**	**108.76**	**17839.65**

The share of the three Companies put together was 27.00 *per cent* (10,435.38 ha) of the total land holdings (38,645 ha) in estate sector for rubber cultivation and 7.84 *per cent* (6,587.78 ha) of cashew cultivated areas (84,000 ha) in Kerala.

Target and Achievement in rubber production

2.1.12 Annual production targets and achievements there against for the three Companies for the period 2004-09 were as shown below:

Estate	2004-05			2005-06			2006-07			2007-08			2008-09		
	T[b]	A[c]	P[d]	T	A	P	T	A	P	T	A	P	T	A	P
PCK															
Kodumon	1450	1380	95.17	1569	1296	82.6	1620	1502	92.72	1568	1441	91.9	1725	1806	104.7
Chandanappally	985	956	97.06	1215	1040	85.6	1415	1267	89.54	1534	1280	83.44	1648	1592	96.6
Thannithode	511	410	80.23	507	326	64.3	504	276	54.76	266	184	69.17	209	217	103.83
Kallala	917	734	80.04	958	655	68.37	973	841	86.43	998	866	86.77	1061	1116	105.18
Adirappally	1089	871	79.98	1190	737	61.93	1196	846	70.74	1130	776	68.67	1121	1097	97.86
Perambra	57	48	84.21	76	60	78.95	109	84	77.06	167	103	61.68	170	155	91.18
Nilambur	207	208	100.48	246	233	94.72	293	260	88.74	252	217	86.11	258	252	97.67
Total	**5216**	**4607**	**88.32**	**5761**	**4347**	**75.46**	**6110**	**5076**	**83.08**	**5915**	**4867**	**82.28**	**6192**	**6235**	**100.69**
SFCK															
Chithelvetty	759	660	87	784	651	83.01	916	638	69.76	724	621	85.71	805	563	69.86
Kumaramkudy	564	417	73.92	528	443	83.81	634	444	70.12	500	424	84.81	564	412	73.03
Mullumala	492	394	79.95	492	438	88.97	526	466	88.64	510	432	84.71	556	495	89.15
Cherupittakavu	432	345	79.85	432	337	78.11	486	359	73.72	403	362	89.87	436	378	86.65
Total	**2247**	**1816**	**80.81**	**2236**	**1869**	**83.55**	**2562**	**1907**	**74.48**	**2137**	**1839**	**86.05**	**2361**	**1848**	**78.26**
RPL															
Kulathupuzha	1565	1372	87.67	1320	1332	100.9	1325	1242	93.73	1275	1171	91.84	1172	1050	89.59
Ayiranallur	601	591	98.34	590	638	108.1	475	483	101.7	378	333	88.1	368	253	68.6
Total	**2166**	**1963**	**90.63**	**1910**	**1970**	**102.6**	**1800**	**1725**	**95.83**	**1653**	**1504**	**90.99**	**1540**	**1303**	**84.61**
Grand Total	**9629**	**8386**	**87.09**	**9907**	**8186**	**82.53**	**10472**	**8708**	**83.16**	**9705**	**8210**	**84.60**	**10093**	**9386**	**92.99**

Audit observed that:

- PCK followed the system of fixing production targets based on clone-wise productivity standards estimated by Rubber Board for the effective area under tapping. However, the production levels comparable with targets were recorded by only two of the estates viz., Kodumon and Chandanappally and in other estates it varied from year to year due to inconsistencies in production levels due to deficiencies in planted area management.

- RPL fixed its production targets based on yield projections in the project report as well as the production results achieved during the previous years. Though the targets were fixed on a realistic basis, the two estates of the Company could not fully achieve the targeted production during the two years 2007-09, in spite of intensive exploitation.

- In SFCK, production targets were arbitrarily fixed comparable to production levels achieved during previous years. Fixation of targets was unrealistic and unscientific as the productivity of rubber plantations had a close relation with their age. By following unscientific method of fixing the production targets not based on Rubber Board standards, the overall yield deficit for the five years 2004-09 was approximately 5,429 MT as against 2,262 MT recorded by the company method. Audit noticed that none of the estates achieved the targeted performance during the five years (2004-2009) even though the targets were fixed on lower

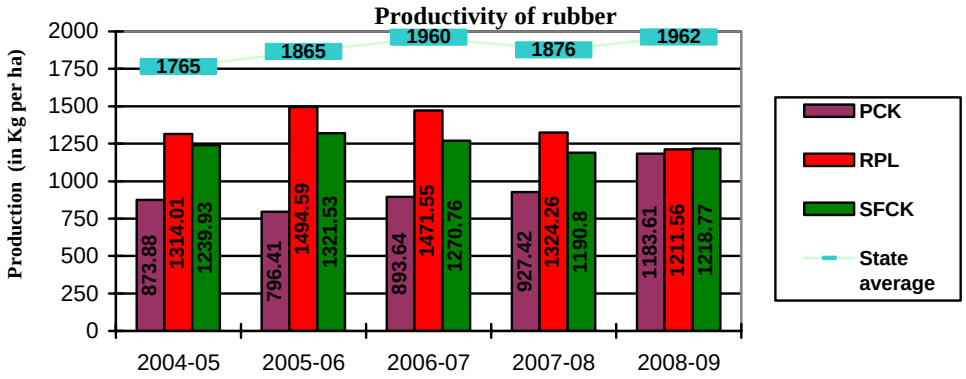
[b] Targeted quantity in MT.
[c] Achievement against target in MT.
[d] Percentage of achievement to targets.

side. The non-achievement of targets was due to non-exploitation of yield applying intensive tapping methods and high rate of task vacancies.

Yield from rubber plantations

The yield from rubber plantations of three Companies was lower than State average yield and PCK recorded lowest yield of less than 50 *per cent* during 2004-09.

2.1.13 The yield from rubber plantations of the three Companies was lower than the State average yield estimated by the Rubber Board every year. The yield ranged from 42.70 *per cent* to 60.33 *per cent* in PCK, 61.75 *per cent* to 80.14 *per cent* in RPL and 62.12 *per cent* to 70.86 *per cent* in SFCK of the state average yield during the period 2004-09 as given below:



Audit observed that:

- The shortfall in yield in respect of RPL and SFCK was due to the fact that major part of their plantations had completed the prime years of productivity. In PCK, shortfall in yield was significant since out of 5,268.61 hectares under own tapping (March 2009), 3,131.89 hectares (59.44 *per cent*) consisted of plantations of most productive age. The lower yield was due to improper maintenance of the plantations in their initial years. The Company replied (August 2009) that it could not carry out all the necessary rubber plant maintenance operations including manuring at the formative stages of development of plantations due to financial crisis faced when large extent of areas came under replanting at a time. The financial crisis was a result of ill-planned replantation scheme under which extensive areas were brought under replanting at a time leading to drop in revenue consequent to reduction in yielding areas.

- The plantations of SFCK mainly consisted of high yielding clones whereas; the other two Companies had a mix of different conventional clones.

- Intensive tapping methods were followed in RPL and SFCK when compared with PCK.

Clone-wise analysis of yield

2.1.14 Rubber plantations are raised using seedlings belonging to different 'clones' like RRIM600, GT1, RRII 105 etc., developed and named by Rubber Research Stations.

Rubber Board had specified the standard yielding capacity of different clones of rubber trees in the different years of tapping. The plantations of these Companies consisted of rubber trees of different clones in different ratios. A comparison of productivity of the plantations of the three Companies, adopting the average yield *per* hectare of different clones in the respective years of tapping, as against the standard yield *per* hectare is given below (details in ***Annexure 9***).

(Quantity in MT)

	PCK			**SFCK**			**RPL**		
Year	Standard	Actual (%)	Shortage	Standard	Actual (%)	Shortage	Standard	Actual (%)	Shortage
2004-05	6982	4389 (62.86)	2593	2601	2243 (86.24)	358	1920	1962 (102.19)	Nil
2005-06	7689	4285 (55.73)	3404	2606	2390 (91.71)	216	1640	1960 (119.51)	Nil
2006-07	8326	4958 (59.55)	3368	2712	2298 (84.73)	414	1464	1738 (118.72)	Nil
2007-08	7781	4854 (62.38)	2927	2746	2154 (78.44)	592	1397	1506 (107.80)	Nil
2008-09	7907	6236 (78.87)	1671	2756	2231 (80.95)	525	1313	1306 (99.47)	7
Total	**38685**	**24722 (63.91)**	**13963**	**13421**	**11316 (84.31)**	**2105**	**7734**	**8472 (109.54)**	**Nil**

It could be seen that:

- The yield record of PCK varied between 56 *per cent* to 79 *per cent* of the standard yield potential during the five years 2004-09. The yield deficit was due to low stand of tapping trees, non-performance of tapping tasks in full, inadequacy of field management and inadequate maintenance of replanted areas as discussed in paragraphs 2.1.15, 2.1.17 and 2.1.21 *Infra.*

- SFCK achieved 78 to 92 *per cent* of standard yield despite having 69 *per cent* of area planted with high yielding clone. As in the case of PCK, shortfall in yield was due to poor stand of tapping trees and short performance of tapping tasks.

- RPL, whose plantations were mostly of conventional clones recorded yield levels almost equal to or higher than (99 to 120 *per cent*) the standard yield despite the low stock of trees. Audit observed that relatively better practices in labour utilisation helped the company to achieve optimum production in spite of low stand of tapping trees.

The shortfall in yield as compared to standard yield during 2004-09 in two companies was Rs. 129.46 crore (PCK Rs. 117.31 crore, SFCK Rs. 12.15 crore).

Audit concludes that based on the average sales revenue *per* MT for the five years 2004-09, the shortfall in yield of 16,066.76 MT (PCK-13,962 MT, SFCK-2,104.76 MT) valued an estimated Rs. 129.46 crore (PCK - Rs. 117.31 crore, SFCK- Rs. 12.15 crore). When compared with the targets fixed by the Companies themselves during the said period, the yield deficit for the three Companies was 7,040.50 MT (PCK-4,106 MT, SFCK-2,262 MT and RPL-672.5 MT) valued at Rs. 52.22 crore (PCK-Rs. 34.25 crore, SFCK-Rs. 12.68 crore and RPL-Rs. 5.29 crore).

Stand of tapping trees

2.1.15 The stand (number of trees available in a specified area) of tapping trees on an average *per* hectare was expected to be 310 beyond the tenth year of planting. Audit observed that, in seven estates of PCK (excluding Kodumon), four estates of SFCK and two estates of RPL, the stand/ stock was below the standard with an overall average of 235 as given in ***Annexure 10***.

Audit observed that:

- The low stand of tappable trees was the major contributory cause for the shortfall in yield in the plantations of these Companies, as discussed in paragraph 2.1.13 *supra.*

- As against the mature area of 6,110.60 ha (PCK), 1,830.93 ha (SFCK) and 1,074.27 ha (RPL), the effective area[e] (with 310 nos. of trees *per* ha) was only 4,771.99 ha (PCK), 1,462.22 ha (SFCK) and 717.38 ha (RPL). The remaining area of 1,338.61 ha (PCK), 368.71 ha (SFCK) and 356.89 ha (RPL) were thus unproductive.

The poor stand of yielding trees in PCK's estates was due to inadequate gap filling and maintenance operations in replanted areas. In respect of SFCK and RPL, the yielding areas consisted of older plantations in which reduction in number of yielding trees occurred over the years, cause-wise data of which was not on record.

Yield pattern in areas replanted by PCK

2.1.16 An analysis of yield pattern in the areas replanted by PCK in their four major estates (Kodumon, Chandanappally, Adirappally and Kallala) between 1990 and 1996 was as given in ***Annexure 11***. Audit observed that the areas of Kodumon and Chandanappally having relatively better stand of tapping trees (293 to 346 *per* ha) could record 67 to 103 *per cent* of the standard yield fixed by Rubber Board whereas the yield recorded by replanted areas of Adirappally and Kallala having stand of tapping trees in the range of 227 to 245 was only 48 to 68 *per cent*. The overall shortfall in yield in 1,912.30 ha of replanted area (Kallala and Adirappally estates) when compared with yield recorded by plantations in 2,255.04 ha raised (Kodumon and Chandanappally) during the same period was 3,581.66 MT worth an estimated Rs. 30.22 crore for the period 2004-09.

The productivity of other three rubber estates of the Company was still lower. The overall average stand of tapping trees in Thannithode estate was only 195 trees *per* ha. Based on the expected stand of 310 trees *per* ha, the effective tapping area of the estate would be 372.39 ha against the gross planted area of 592.01 ha. While the average stand of tapping trees in the plantations of earlier years (when there were damages due to wild life attack) in Nilambur estate was in the range of 205 to 245, the stand of newly replanted areas was still lower (94 to 194 in 1997 and 2000 areas) although most of the new plantations

[e] **Effective area = Area actually required to grow the actual available yielding trees.**

were raised after providing power fencing. Though the plantations of Perambra estate were of the age group of 10 to 22 years and belonged to high yielding clones of RRII 105, the productivity of the areas was no better. As against the standard yield of 1250 kg to 1843 kg *per* ha estimated by the Rubber Board, the actual yield achieved by the estates was in the range of 509.31 to 859.09 kg *per* ha *per* annum during the period 2004-09.

Thus, the overall yield shortfall suffered by PCK was due to low stand of tappable trees in five out of seven estates which was the result of inadequate maintenance of plantations during formative years.

Inadequate field supervision and internal control

2.1.17 PCK reduced staff strength in its offices and estates from 2002-03 onwards to overcome the financial crisis then prevailing. When the financial position improved later (2008), the Management decided (January 2008) to restore the staff strength to the year 2003 level. Analysis of the staff position and strength of workers in the various estates indicated that even after replenishment, the available strength would not be adequate for intensive management of plantations. In the absence of required number of employees, the production is suffering.

The technical consultant appointed (August 2007) by the Board also reported (January 2008) that the shortages of staff affected the production performance.

2.1.18 SFCK management was not exercising proper internal control over the operational and financial transactions in the estates. Estate-wise trial balance and profit and loss accounts were not prepared. In the absence of estate-wise analysis of expenditure, comparison of financial data for ensuring economy in expenditure and to enable reconciliation of physical data with financial data was not possible. Physical and financial statements on different maintenance operations like replanting, weeding etc., were also not obtained from estates and, therefore, management was not aware of efficiency and economy of operation of each estate.

Management stated (April 2009) that it required additional staff strength for meeting the above requirements. Audit recommends that estate-wise cost data may be prepared as the expenditure will be more than offset by the benefits arising out of better MIS and faster results. It may also be possible to use the existing staff for the purpose.

Manpower Management

2.1.19 The three Companies engaged both regular and casual workers for carrying out tapping and plantation maintenance works in rubber estates, cultural operations and harvesting in cashew estates. The land (area in ha)-labour (number of tappers/workers) ratios of the three Companies as on March 2009 were as indicated below: (estate-wise details in ***Annexure 12***)

Company	Rubber estates		Cashew estates
	Tappers	General workers	General workers
PCK	4.96:1	6.65:1	19.06:1
SFCK	2.60:1	23.65:1	-
RPL	2.96:1	2.87:1	-

Audit observed that:

- The available manpower was unevenly deployed by PCK in the different rubber estates, at the cost of productivity. The Kodumon and Chandanappally estates having comparatively better productivity were provided with lesser number of tappers at 4.74 ha and 6.59 ha *per* tapper respectively, whereas the Perambra estate, which ranked last in productivity, maintained the best land-labour ratio of 3.28: 1, for tapping work.

- The estates of PCK were not keeping proper records showing activity-wise booking of labour on a day to day basis.

- SFCK was having better strength of tappers, still the Company experienced shortage of tappers due to inefficient utilisation, as discussed in paragraph *2.1.22 infra*.

- RPL could carry out tapping and other plantation maintenance works by engaging own workers, whereas, PCK and SFCK resorted to contract arrangements.

Performance of Tapping Tasks

2.1.20 While the yield potential itself was deficient due to inadequate stand of tapping trees as discussed in paragraph *2.1.14 supra*, exploitation of the available yield to the full extent was also not attained in these Companies, owing to non-performance of all tapping tasks, particularly in PCK and SFCK.

PCK suffered yield loss of 2,219 MT involving revenue loss of Rs. 19.23 crore due to non-performance of tapping tasks in full during 2004-09.

Audit observed that:

- PCK suffered loss of yield of approximately 2,219 MT involving possible revenue of Rs. 19.23 crore on non-performance of 1.44 lakh tappable tasks (8.02 *per cent* of the total tasks) during the five years 2004-09.

SFCK suffered yield loss of 684.32 MT involving revenue loss of Rs. 5.56 crore due to non-tapping for want of tappers during 2004-09.

- In SFCK, the tasks unperformed during 2004-09 were 50,299 nos. (6.03 *per cent*), involving yield loss of 684.32 MT worth Rs. 5.56 crore.

Audit observed that large scale absenteeism of workers on rolls was the main cause of non-performance of tapping tasks in full which was avoidable by adopting better management practices.

Delay in commencement of tapping in newly developed plantations of PCK

2.1.21 Rubber trees attain the minimum tappable girth of 45-50 cm (at a height of 125 cm from bottom) by the seventh year of planting.

Commencement of tapping in a gross area of 882.39 ha replanted between 1994 and 2000 in six rubber estates of PCK, had to be postponed up to eleventh year of planting, due to non-attainment of required girth standards, as well as non–availability of additional tappers, to open new areas.

The inefficient maintenance and upkeep of newly raised plantations and failure in engaging need based additional tappers resulted in loss of production.

Under performance of Tapping Tasks in SFCK

2.1.22 According to labour norms followed, a tapping task comprises of 300 to 350 tappable trees on an average. As the number of trees gets reduced, due to natural damages during the course of time, the tapping tasks need to be re-tasked periodically to maintain the task-norms fixed. Such re-tasking was not done in RPL and SFCK, as a result of which, the average number of trees *per* task as of March 2008 stood at 226 in RPL estates and 268 in SFCK estates, as against the norm of 300 trees in PCK, where re-tasking was done periodically. Since the RPL areas were already earmarked for replanting from 2001 onwards, intensive tapping was going on in its estates and hence norm was liberalised.

Failure of SFCK Management in enforcing the labour norms for tapping during 2004-09 resulted in a loss of Rs. 5.75 crore.

SFCK's tapping areas were either under normal tapping or '*Controlled Upward Tapping'* (CUT), requiring systematic refixing of tappable tasks. At the instance of Audit, Management decided in November 2008 to re-block the areas fixing the number of tapping trees as 300 *per* task and envisaged gain from re-fixing tapping tasks was Rs. 1.15 crore *per* annum. The minimum loss incurred by the Company due to its failure in enforcing the labour norms earlier i.e., during the five years 2004-09 amounted to approximately Rs. 5.75 crore.

Productivity of tappers

2.1.23 The average crop collection in PCK was 13.40 kg to 15.77 kg *per* task, while in SFCK it was in the range of 12.92 kg to 14.19 kg. In RPL it was in the range of 9.55 kg to 12.28 kg during the period 2004-08. The highest productivity record of PCK however, was due to contribution of its most productive estates at Kodumon and Chandanappally. The performance of other estates of PCK was at par or below par, when compared with SFCK/RPL estates. When compared with the standard of Kodumon and Chandanappally in task performance the extra cost on tapping and collection incurred by other estates of PCK worked out to Rs. 1.01 crore *per* annum.

RPL Management attributed (February 2009) the lower output of its tappers to the fall in yield of trees due to ageing.

PCK Management reasoned (August 2009) the higher cost in estates other than Kodumon and Chandanappally to the lower task performance and stated that re-tasking was in progress in those estates.

Higher cost of rain guarding in PCK estates

2.1.24 The tapping areas in PCK were having trees with relatively shorter girth standards when compared with those of SFCK and RPL due to age factors. Therefore, the rain guarding works should have been easier in PCK estates. Yet, the Company had been, allowing abnormally high labour rates for rain guarding work. While the rates admitted by SFCK and RPL were in the range of Re.1 to Rs. 2 *per* tree during the five years 2004-09, the rates of PCK ranged between Rs. 2.31 and Rs. 2.99 *per* tree on an average during the same period. When compared with average wage rates paid for by other two Companies, the avoidable extra expenditure incurred by PCK for rain guarding work for the five years 2004-09, amounted to Rs. 75.85 lakh.

Avoidable extra expenditure due to payment of higher rates for rain guarding work by PCK during 2004-09 amounted to Rs. 75.85 lakh.

It was observed that Rubber Board had recommended rain guarding only in areas where the yield was 675 kg *per* hectare *per* annum or more and 25 or more tapping days were annually lost by rain. Though, the Company was having large extent of areas with yield below 675 kg *per* annum, and tapping was done once in four days, no cost benefit analysis of rain guarding had been carried out and all the areas were rain guarded irrespective of yield potential.

Economy of field operations was therefore not given due consideration by PCK Management as evidenced by these instances.

Cost of tapping and collection

2.1.25 High operating cost coupled with low productivity *per* tree had escalated the cost of tapping and collection for PCK. Analysis in Audit based on figures for 2007-08 revealed that average cost of tapping *per* task was Rs. 213.15 in PCK as against Rs. 159 in SFCK and Rs. 129.31 in RPL. The tapping cost *per* kg of production was Rs. 13.47 *per* kg for PCK, as against Rs. 12.20 for SFCK and Rs. 12.84 for RPL.

Cost of tapping per task was higher in PCK at Rs. 213.15 against Rs. 159 in SFCK and Rs. 129.31 in RPL.

The cost of tapping was as high as Rs. 21.07 *per* kg of rubber and Rs. 17.27 *per* kg for Perambra and Thannithode estates of PCK respectively, and when expressed as a percentage of revenue realisation, it was 22.44 *per cent* for Perambra and 18.29 *per cent* for Thannithode against 11 to 13 *per cent* in other estates.

Inappropriate classification of tapping tasks

2.1.26 All the three Companies followed the decisions of Plantation Labour Committee (PLC), a joint body of Government, Company Managements and Labour Unions formed to fix the wage rates of plantation workers. Accordingly, the tapping tasks in the estates were to be classified into four classes, based on yield, taking yield *per* 100 trees *per* annum as the norm. Over kilo[f] wages for collection of rubber in excess of the standard minimum fixed for each class were to be distributed among tappers as an incentive for encouraging labour and maximising production.

[f] **Extra wages paid for collection of latex and scrap in excess of the standards fixed for different classes.**

Audit noticed that, due care was not exercised by PCK and SFCK to follow the classification norms, and many blocks remained incorrectly classified by PCK, whereas, SFCK arbitrarily classified the blocks, clone-wise, ignoring the stipulation of PLC to link it with productivity of tree rather than clone. In most of these cases the tasks were classified in classes higher than the appropriate one. The inappropriate classification had negative impact on productivity.

Replanting Programmes

Delay in replanting old plantations with low yield by PCK

2.1.27 According to an expert engaged by SFCK (November 2008), rubber plantations that were past the productive age of 30 years could be felled and replanted, when the yield *per* hectare dropped below 75 *per cent* of national average yield, (1705 kg – 1874 kg *per* ha) unless the market prices of rubber were so high that a lesser yield could also fetch adequate revenue to maintain viability.

Both PCK and RPL were having plantations raised between 1973 and 1978 to the extent of 791.75 and 1,779.4 ha respectively. Though the productivity of PCK plantations was only around 30 to 40 *per cent* of national average yield, the Management proposed replanting only from the year 2010. At the same time RPL had already replanted 1095.45 ha, although major part of their plantations was having productivity in excess of 75 *per cent* of national average.

RPL also adopted intensive tapping in these plantations and exploited the crop potential to the maximum extent. In the case of PCK, crop exploitation from older plantations was given the least priority owing to shortage of tappers and declining yield from trees. Thus, the overall average yield from older PCK plantations decreased steadily year to year (713.643 kg *per* ha in 2004-05 to 227.99 kg in 2007-08 and to 119.38 kg in 2008-09) whereas, it was on the increase in RPL till 2006-07 (1339 kg *per* ha in 2004-05 and 1462.43 kg *per* ha in 2006-07) since when there was marginal yield reduction consequent to optimum exploitation (1,339.580 kg in 2007-08 and 1,191.11 kg in 2008-09).

In view of the above, retention of the above plantations by PCK beyond the period of 30-32 years with yield levels below 50 *per cent* of national average was not appropriate, though the Company's financial position was conducive for taking up replantation as it held surplus funds in the range of Rs. 8.10 crore to Rs. 60.75 crore in fixed deposits during the period 2005-06 to 2008-09.

Improper implementation of Controlled Upward Tapping (CUT) in PCK

2.1.28 In order to tide over the financial crisis following implementation of extensive replantation programme, PCK decided (March 2000), in consultation with Rubber Board, to introduce Controlled Upward Tapping (CUT) in 1,102 ha aiming at projected yield increase of upto 50 to 70 *per cent*, estimated by Rubber Board. Rubber Board cautioned the Company to exercise control measures over the new tapping system and insisted for strict

supervision, failing which it would not be result oriented. Five years after implementation of CUT (2004-05), Management noted (November 2005) that the system was practised in the estates in a callous manner with excess bark consumption, rendering renewed bark unfit for tapping and necessitating premature commencement of slaughter tapping before the normal period of exploitation (sixteen years) under CUT.

Company sought for (December 2005) the advice of Rubber Board in the matter and inspection revealed (March/April 2006) that severe damages had already occurred in the CUT areas due to improper implementation. The massive losses sustained by the Company due to reduction in economical life of plantations by about eleven years were, however, not assessed by Management. Decision of Board of Directors to conduct a detailed enquiry to fix responsibility for the losses was also not implemented.

Under exploitation of revenue potential from slaughter tapping areas

2.1.29 As recommended (December 2006) by Rubber Board, PCK decided (December 2006) to commence early slaughter tapping in failed CUT areas and replant them in phases from 2010 onwards. Considering the dearth of tappers and the opinion of Rubber Board not to engage own tappers for slaughter tapping, the Management decided to sell the slaughter tapping rights on contract basis. Though it was initially decided to give away the entire area of 1,102 ha for contract tapping, the Board later (March 2007) decided to exclude 287.96 ha on the plea that undertaking replanting in an extensive area at a time would be a difficult task. The rest of the areas (814.04 ha) was offered (March/April 2007) for sale in blocks of 1,000 tapping trees fixing benchmark price of Rs. 10 lakh *per* block for two years' slaughter tapping, most of which were sold out.

Decision of PCK to retain 287.96 ha under CUT instead of giving for contract slaughter tapping resulted in a revenue loss of Rs. 5.11 crore.

Slaughter tapping not undertaken in the excluded area of 287.96 ha resulted in phenomenal yield loss, realising which the Management finally decided (November 2008) to sell off those areas also for contract tapping. Tender cum auction process for sale was in progress (May 2009). The loss sustained by the Company on not giving away these areas for slaughter tapping contract along with other areas worked out to Rs. 5.11 crore based on actual yield/ revenue realisation from those areas up to March 2009.

Improper scheduling of slaughter tapping

2.1.30 The contract period of areas which were given for slaughter tapping by PCK was due to expire by May /June 2009. These areas could, therefore, be replanted only after one year. Audit observed that RPL finalised the felling contracts of rubber trees by November-December of a year and the felling activity was carried out between January to March of next year. The Company carried on with tapping even when the felling of trees was in progress and, therefore, crop exploitation to the maximum extent was made. Yield exploitation in PCK from areas earmarked for felling did not have the desired intensity as observed in RPL.

Processing of Natural Rubber

Shortages in field latex received at processing factories

2.1.31 The system of reconciliation of field weight of latex collected, as recorded in collecting stations, with the factory weight recorded at processing factories, was not in existence in PCK and SFCK. It was not ensured that the quantities transferred to factories, were properly taken into stock and there was no abnormal loss or pilferage in transit. Reconciliation made in Audit disclosed substantial quantity shortages in field latex taken into stock by the centrifuging factories of these Companies.

Audit noticed:

- In PCK, based on factory figures, there were short receipts of field latex to the extent of 884.02 MT valuing Rs. 7.28 crore during the period 2004-09. The reasons for the abnormal shortages recorded at factories were not investigated, despite adopting factory receipt figures at gates. Shortage in quantity of latex already acknowledged by the factories to the extent of 15 MT valuing Rs. 14.08 lakh in 2007-08 as detected in Kodumon estate and reported by Audit was also not investigated by the Management. The field wet weight of latex was also recorded by Kodumon estate from 2008-09 onwards and it recorded a difference (net) of 21.020 MT (up to February 2009) with factory weight. Dry Rubber Content (DRC) test conducted by estate, in Rubber Board laboratory disclosed that the DRC reported by Factory Lab was lower.

Unreconciled shortage of field latex in PCK factories was 884.02 MT valuing Rs. 7.28 crore. Similar shortage in SFCK was to the extent of 66.78 MT worth Rs. 0.62 crore.

- Similar short receipts at the processing factory of SFCK during the period 2005-08 were to the extent of 66.78 MT (DRC) valuing Rs. 0.62 crore.

- RPL had reconciled the field weight with factory weight and no abnormal variation between the two was observed in their estates, where the factory weight was in fact higher than field weight in the two estates. The overall excess was 233.12 MT in respect of Kulathupuzha estate and 36.71 MT in respect of Ayiranallur estate for the period 2004-09.

The huge quantity variations between field and factory stock accounts in SFCK and PCK exhibit absence of effective internal control over the vital areas of production, despatches and stock accounting.

PCK Management stated (August 2009) that the field weighment systems were unscientific and that steps will be taken to improve them. SFCK also agreed to introduce systematic reconciliation of quantity accounts.

Short production of Cenex due to lower centrifuging efficiency

Low rate of recovery of Cenex due to low centrifuging efficiency of factories of PCK and RPL resulted in a loss of revenue of Rs. 3.00 crore.

2.1.32 According to industry standards, not less than 87 *per cent* of the input field latex should be obtained as Cenex in the latex Centrifuging Factories. Against this, processing efficiency of PCK's centrifuging factories at Kodumon and Kallala ranged between 81.15 and 85.25 *per cent* during 2004-09. The loss of revenue on account of low rate of recovery of cenex amounted

to Rs. 2.64 crore for the period 2004-09. Similar loss sustained by RPL (2004-09) where the average efficiency was in the range of 84.64 to 86.72 *per cent* amounted to Rs. 0.36 crore.

Audit observed that the centrifuging machines of the factories of PCK were installed in 1972 (Kodumon) and 1978 (Kallala) and their inefficiency was the major reason for short recovery of cenex.

Cost of conversion

2.1.33 The cost of conversion of field latex into cenex differed (2004-09) from Company to Company. On an average, it amounted to Rs. 8.61 *per* kg in PCK, Rs. 10.77 *per* kg in SFCK and Rs. 15.74 *per* kg in RPL during 2007-08. The higher cost of conversion in RPL and SFCK was due to lower capacity utilisation.

Uneconomic production of crumb rubber

2.1.34 PCK and RPL manufactured ISNR[g] grade Rubber (crumb rubber) out of field scrap collected from estates and marketed it through dealers on tender cum auction basis. The Companies had been using outdated technology for processing and hence desired quality standards were not maintained for this value added product. Out of a gross quantity of 3,734.35 MT of crumb rubber produced by PCK during 2004-08, 1,425.65 MT (38.18 *per cent*) was of inferior grade. Generation of inferior grade by RPL was 252 MT out of total production of 991 MT. As a result, the cost of production was as high as Rs. 11.31 to Rs. 14.86 *per* kg for PCK and Rs. 9.55 to Rs. 14.16 *per* kg for RPL (prime cost excluding overheads) whereas, the additional price advantage on value addition was very less. When compared with the prices realised by SFCK which is selling scrap totally unprocessed, the extra prices realised by PCK and RPL were meager. Loss due to conversion of scrap as crumb rubber by PCK and RPL amounted to Rs. 4.84 crore (PCK Rs. 3.44 crore, RPL Rs. 1.40 crore) during 2004-08.

Conversion of field scrap as crumb rubber using outdated technology by PCK and RPL resulted in loss of Rs. 4.84 crore.

RPL modernised (February 2009) its crumb rubber factory, investing Rs. 1.09 crore by replacing the existing diesel based drier with bio-fuel (Gasifire) based drier. Scrap rubber required to maintain single shift operation in a year was 600 MT. The actual generation of scrap for the last three years (2005-08) was only 300 MT *per* annum and with more areas coming under replantation in future years, it would take a fairly long period for the Company to ensure captive availability of scrap, to the required extent. The marginal contribution on processing being negligible, outsourcing the raw material was also not a viable option. The Management was yet (May 2009) to formulate a plan for meeting the raw material requirement.

PCK is also contemplating modernisation of its crumb rubber factory. As and when the proposal materialises, it would be still more difficult for RPL to utilise the spare capacity as the supplies from SFCK or PCK were the

[g] **Indian Standard Natural Rubber.**

dependable source for RPL for meeting the raw material requirement at present.

Marketing Management

Short realisation of prices of Cenex

2.1.35 The three Companies fixed the prices of Cenex on mutual consultation. A price fixation committee represented by Government and Rubber Board was also involved in the pricing decisions. A comparison of selling prices fixed for the period 2005-09, however, disclosed several instances of mismatches in prices resulting in price of one Company being lesser than that of the other two Companies. The aggregate shortfall in revenue of the three Companies during the period amounted to Rs. 1.69 crore (PCK Rs. 126.13 lakh, SFCK Rs. 32.96 lakh and RPL Rs. 9.63 lakh).

Lower sales realisation for skim crepe

2.1.36 Analysis of sales realisation of skim crepe marketed by SFCK in comparison with the realisation recorded by the other two companies indicated, that the price realised by the Company was on the lower side most of the time during 2004-09. The monthly average price realisation of the Company in 19 out of 21 months (for which comparable data was available) between April 2004 to March 2009 was lower. As compared to the higher prices obtained by the other two Companies, there was overall shortfall in revenue of Rs. 19.08 lakh.

It was further observed that the Company idled its crepe milling plant and resorted to uneconomical sale of unprocessed skim (skim coagulum). Better revenue generation opportunity was thus lost. Revenue loss on this account during 2004-09 amounted to Rs. 61.59 lakh.

The Management attributed (July 2009) the lower price realisation to the absence of proper drying facility and frequent breakdown of the mill because of which the quality of the product was inferior. Audit observed that Company had sufficient resources to modernise the mill but the inertia in doing so caused the short realisation.

Low productivity of cashew estates of PCK

2.1.37 Bulk of the crop from PCK's exclusive estates of Kasaragod (959.50 ha), Rajapuram (1,281.68 ha), Cheemeni (959.50 ha) and Mannarghat (504.50 ha) were sold out at flowering stage rendering yield potential of the areas unascertainable. Based on revenue realisation (2005-09), the income generation from these areas was in the range of Rs. 3,024 to Rs. 9,469 *per* ha as against the estimated revenue potential of about Rs. 30,000 *per* ha based on yield statistics of cashew planted areas in the state published by Directorate of Cashew and Cocoa Development (DCCD). The revenue deficit in comparison with state average worked out to about Rs. 49.25 crore for the period 2005-09.

Audit noticed that the average stand of yielding trees was only 70 to 95 numbers *per* ha in different estates (4,198.28 ha) as against the general norm of 200 trees *per* ha. Areas to the extent of 783.13 ha (16 *per cent* of total area) was having stock of below 50 trees *per* ha and stock in 2014 ha (41.50 *per cent* of total area) was between 50 and 100 nos. The effective area under cashew cultivation based on stand of trees was only 2,236.58 ha as against the gross extent of 4,918.28 ha used for cashew cultivation in these estates. Considering the low revenue yielding capacity of the estates, the Company was not carrying out all the cultural operations except periodical weeding. Inadequate maintenance operations had contributed to lower productivity in these estates.

Cashew plantations in Rubber estates

2.1.38 The productivity of cashew area in rubber estates of PCK in 1,230.47 ha (March 2009) was worse than that of the exclusive cashew estates. The revenue generation from these areas was as shown in ***Annexure 13*****.**

Audit observed that:

- The net revenue was not even sufficient to meet the direct overheads on area management in the case of Thannithode estate having 58.08 ha of cashew plantation. The net income (Rs. 448 to 551 *per* ha) was lesser than the lease rent (Rs. 1300 *per* ha) payable.

- The cashew areas of 33 ha replanted in Perambra during year 2000 season incurring Rs. 6.56 lakh and those replanted during the year 2005 (1.59 ha) and 2006 (5.59 ha) incurring Rs. 1.69 lakh were having a stand of only 81, 15 and 39 trees *per* ha respectively.

- The stand *per* ha in cashew plantation raised (1994-2007) over 73 hectares in Nilambur estate at a cost of Rs. 30.48 lakh was only in the range of 9 to 93 Nos. The net income from these areas was less than Rs. 100 *per* ha *per* annum.

Fund Management

Attractive prices prevailed during the period 2004-09 helped the Companies to maintain consistent profitability and record sound reserves and surplus position. Deficiencies in fund management observed during the course of the performance audit are mentioned below:

Premature closure of Fixed deposits carrying higher rates of interest

2.1.39 In order to meet (March 2008) the demand for Agricultural Income Tax (AIT) (Rs. 7.54 crore), SFCK prematurely closed (March 2008) fixed deposits of Rs. 5.04 crore with Treasury and Rs. 2.50 crore with Kollam District Co-operative Bank fetching higher rates of interest, retaining other fixed deposits fetching lower rate of interest. The choice of deposits for closure was made, so as to maintain the ratio of treasury deposits and bank deposits at 1:1, as decided (February 2007) by the Board. As the Board was at

Injudicious decision by SFCK to close high interest bearing deposits vice low interest bearing deposits resulted in loss of potential income of Rs. 19.34 lakh.

liberty to change the ratio as and when required in the best financial interest of the Company, the reasons attributed were not justified. The Company was also having funds in fixed deposits with treasury much in excess of the mandatory requirement for claiming, replanting reserves as an allowable expenditure for AIT assessment. Thus, injudicious decision to close high interest bearing deposits vice low interest bearing deposits resulted in loss of potential interest income of Rs. 19.34 lakh during the period March 2008 to March 2009.

Non-utilisation of tax relief under Agricultural Income Tax, 1991 by SFCK

2.1.40 According to Section 9(3) of the Agricultural Income Tax Act, 1991, (a Kerala State Act) a sum not exceeding 20 *per cent* of the total agricultural income of the assessee, deposited under Investment Deposit Scheme (IDS) during previous year, could be claimed as rebate for the respective assessment year. The amount so deposited, could be withdrawn in future for the purpose of replantation, modernisation of factory, land development etc., covering the main spheres of activities.

Non-utilisation of tax relief under Agricultural Income Tax Act resulted in loss of rebate and interest amounting to Rs. 1.84 crore to SFCK.

Audit observed that the Company had funds amounting to Rs. 2.86 crore during the four years 2004-08 in fixed deposits fetching interest at 7.5 *per cent* only as against 10 *per cent* receivable on IDS. The income foregone by the Company by not depositing in IDS together with rebates foregone amounted to Rs. 1.84 crore (Rebate Rs. 1.72 crore and interest Rs. 12.04 lakh) during 2004-08.

Non-utilisation of tax benefits under Rubber Development Account Scheme

2.1.41 The Government of India introduced (2004-05) a scheme for promotion of rubber cultivation viz., Rubber Development Account Scheme (RDAS) as per which an income tax assessee carrying on business in rubber planting sector was eligible for a deduction of 40 *per cent* of its business income, under Section 33AB of Income Tax Act, in computing total income, if it deposited an equal amount with NABARD in any specified Scheme approved by Rubber Board. The amount so deposited also attracted simple interest at 5.5 *per cent* and was available for withdrawal for meeting capital expenditure after a period of six months. None of the three Companies availed of the tax benefits under the Scheme. The amount of unutilised tax benefits was, however, not ascertainable in respect of RPL and SFCK since, the income tax assessments of these Companies for the relevant period (2004-08) were not finalised till date (May 2009).

Failure to utilise tax benefits under Rubber Development Account Scheme resulted in avoidable payment (2007-08) of income tax by PCK amounting to Rs. 37.92 lakh.

It was noticed that PCK had not availed the benefit of the above scheme during the financial year 2007-08 (Assessment year 2008-09) during which it submitted a return with total business income of Rs. 3.16 crore and total tax liability of Rs. 1.08 crore. Had the Company opted to deposit Rs. 1.26 crore being 40 *per cent* of the total business income under RDAS, it could have reduced the income tax liability by Rs. 37.92 lakh when the Company was also keeping necessary surplus funds in fixed deposit.

Non-utilisation of financial assistance available from Rubber Board

2.1.42 Rubber Board formulated (December 2005) a scheme for financial assistance to large rubber growers in public sector for modernisation of latex centrifuging factories during 2005-06. SFCK obtained approval (January 2006) of Rubber Board for modernisation of their Effluent Treatment Plant (ETP) under this scheme. The Company failed in completing the project within the time limit (March 2009) fixed by Rubber Board. Thus, the Company had to forego the full amount of financial assistance amounting to Rs. 10 lakh available under the scheme. The delay in completion of work was attributed by Company to the delay in supply of required materials by the Company to the work contractor because of which no penalty was also recovered from the contractor.

Conclusion

- **The three Companies utilised 93 *per cent* (RPL), 90.19 *per* cent (PCK) and 89.41 *per cent* (SFCK) of their land holdings for raising plantations. The rest of the areas were either used for infrastructural facilities or left as vacant patches, secondary forests etc. The land holdings were not properly surveyed and demarcated. Areas were also not adequately safeguarded from encroachments.**

- **The productivity of the planted areas was below the state average productivity. Land being one of the costliest resources in the State, the phenomenal shortfall in productivity meant national loss of significant extent. The shortfall in productivity was due to lower stock of yielding trees in the planted areas in all the three Companies and under exploitation of yield due to ill-deployment/ utilisation of labour in PCK and SFCK. Unscientific tapping practices followed by PCK under inadequate supervision also resulted in massive losses by way of reduction in economical life of plantations.**

- **Supervision and internal control measures were found wanting in PCK and SFCK causing loss of production in crop delivered to factories.**

- **PCK and RPL did not maintain the centrifuging efficiency as per industry norms in the production of cenex, on account of non-modernisation of machinery.**

- **The Companies did not always obtain matching prices for their products on a consistent basis, although they were in same market.**

- **Manufacture of value added products was undertaken by PCK and RPL without proper cost-benefit analysis and suffered huge losses incurring additional input costs without matching price advantage.**

- **SFCK failed in availing of financial assistance from Rubber Board for modernisation of its centrifuging factory. PCK did not comply with the recommendations of Rubber Board in the implementation of Controlled Upward Tapping (CUT).**

- **Surplus funds available with the Companies have not been utilised ensuring optimum financial advantages.**

- **High revenue potential of slaughter tapping was not fully tapped by PCK.**

- **Replanting programme of PCK was not properly planned and executed.**

Recommendations

- **The companies should formulate an action plan to achieve productivity comparable with State/National average by eliminating task vacancies, systematic restocking of poorly stocked old plantations with modern high yielding clones and optimising production by enforcing closer supervision and control over field operations and tapping methods.**
- **Cost benefit analysis of value added products should be made at periodical intervals taking into account the fluctuations in the market prices and product mix changed from time to time to derive maximum financial advantages in the given situations.**
- **Cost control measures should be introduced in all the three companies on the basis of inter-company rates/ cost comparison of regular raising and maintenance operations.**
- **As was already done by PCK, RPL and SFCK should also exploit the revenue potential of slaughter tapping contracts in the areas earmarked for felling and replanting which would also help to overcome labour shortages experienced by both the Companies in tapping and field operations.**
- **Internal control systems should be strengthened by PCK and SFCK in the areas of field weighment of latex and scrap, transfer of crop from field to factories and effective inter-estate comparison of efficiency of operations.**
- **PCK should replant the poorly stocked cashew areas (most of which were already past their economical period of retention) with modern high yielding varieties to optimise the revenue potential of land now being under-exploited.**
- **Land holdings of the three Companies should be properly surveyed, demarcated, lease/title deeds executed and boundary protection measures taken to protect from encroachments. The ambiguities in Government orders on land leased out to PCK should be removed to facilitate settlement of lease rent without further delay.**

2.2 The Kerala Minerals and Metals Limited

Information System Review on Computerisation

Executive Summary

The Kerala Minerals and Metals Limited was incorporated in February 1972 with the objective of carrying on the business of mining, processing of minerals and metals. Production facilities installed were fully integrated with the two units viz., Mineral Separation Unit (MS unit) and Titanium Dioxide Plant (TP unit).

IT initiative

The Company had developed several need based Applications by using Application Development tool, Power Builders and Oracle database from 1999-2000 onwards. It had computerised purchase, stores, production, marketing (domestic/ export sale), finance, attendance/ HR management, payroll management and Management Information System Modules.

Absence of strategic IT Plan

The Company did not have any approved and documented IT Policy and IT plan upto April 2009. Since initiation of computerisation project, lack of planning resulted in indefinite continuation of system development process even after completion of ten years.

System development

No documentation in respect of user requirement specification was made in respect of sales, purchase, stores and finance modules developed in-house by the Company. This led to an ad-hoc system development approach.

System maintenance

No documented and approved Version Control Procedure was in existence with the result that different departments were using different versions as indicated from the fact that CENVAT statement generated from the accounts department were different from the one generated from the version supplied to auditors.

Purchase module

Purchase module did not provide for computing freight charges and facility for reporting the appropriate time for purchase. Information like stock level, quantities pending, quality checks and unreconciled quantities were manually filled in exposing the system to the risk of unintended human errors or deliberate manipulations.

Stores module

Fast, slow/ non-moving categorisation was not subjected to review during the last several years which resulted in classification of non-moving items as fast moving items and non-moving items as slow moving items.

Sales Module

Export invoices were prepared outside the system defeating the very purpose of computerisation. The duplication of invoice took place on account of lack of system control. The system is exposed to the risk of changing the rate master by the end users.

Pay roll Module

The pay roll module was yet to be implemented despite its being ready for use since October 2004.

Finance Module

The programme for drawing up Profit and Loss Account and Balance Sheet on any date could not be utilised by the Company so far (September 2009) on account of deficiency in implementation.

Conclusion

The Company did not have an IT policy, strategy and long term plan which had resulted in ad-hoc and disintegrated management of the system. None of the module is complete and self-supporting requiring human intervention at various stages of modules defeating the very purpose of computerisation. The Company should draw up and document IT Policy and ensure that all modules comply with the business rules and accounting standards wherever required.

Introduction

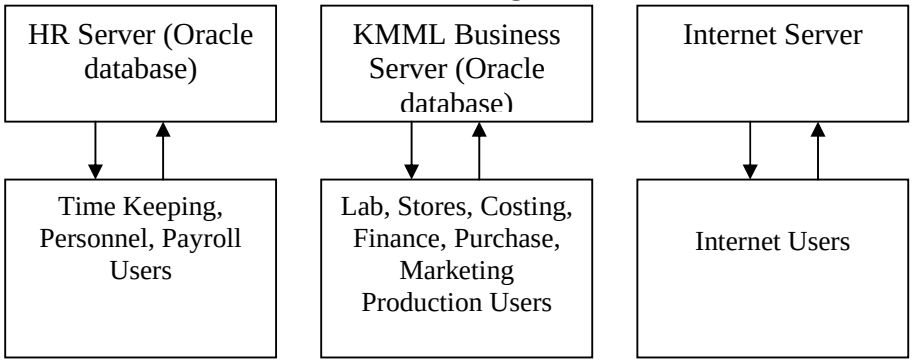
2.2.1 The Kerala Minerals and Metals Limited (Company) was incorporated in February 1972 with the objective of carrying on the business of mining and processing of minerals and metals. Production facilities installed were fully integrated with the two Units viz., Mineral Separation Unit (MS Unit) and Titanium Dioxide plant (TP Unit).

The IT Resource management vests with EDP department headed by Joint General Manager (EDP), directly under the Chairman and Managing Director (CMD) and assisted by Manager (EDP) and one Assistant. There were 244 PCs, three Servers and accessories connected over LAN and Oracle RDBMS[1], Power Builder, Adobe PageMaker, Symantec Antivirus and MS office applications. The Company has an optical fiber backbone for establishing network connectivity inside the Company with structured cabling to connect the Personal Computers (PCs) to the network. The databases for various applications were maintained in Oracle[2] RDBMS.

2.2.2 The Company has developed from 1999-2000 onwards several need-based Applications by using Application development tool PowerBuilder[3] and Oracle database. It had computerised Purchase, Stores, Production, Marketing (Domestic/ Export Sales), Finance, Attendance Management/HR Management and Pay roll management (THP) and Management Information System (MIS module). The company had two different mail Servers (kmml.com and kmmlmail.com) for external email communication.

2.2.3 The data flow diagram is indicated below:

Dataflow Diagram



[1] **Relational Database Management System.**
[2] **RDBMS software by Oracle Corporation.**
[3] **An Application development tool by Sybase Inc.**

Audit Objectives and scope

2.2.4 The main objective of audit was to ensure that computerisation contributed to achieve business objectives effectively and efficiently. Other objectives were to evaluate:

i) the process of system development life cycle and its management;
ii) adequacy of IT security; and
iii) adequacy and effectiveness of built in controls in the system to ensure data integrity.

Scope of audit included review of the performance of all major Applications developed in-house (purchase, stores, sales, pay roll and Finance) and their utilisation in business processes, test check of transactions processed through the System for the year 2006-07 to 2008-09 and performance of IT assets. Risk Assessment and preliminary study was carried out in October 2008 and final Audit carried out during April 2009 to May 2009.

Audit Methodology

2.2.5 The audit methodology included:

i. data collection through questionnaire;
ii. discussions with Officers and end users of the applications;
iii. examination of files and documents including system documents, inspection and checking of Computer and related infrastructures, simulation of possible threats and business process; and
iv. data analysis using CAAT[4] tool IDEA[5], data analysis using Microsoft Access[6] and Oracle SQL[7] and cross checking with manual records wherever required.

Audit Criteria

2.2.6 The criteria considered for assessing the achievement of audit objectives were Best practices in Information Technology (IT) system development, Input and internal controls for data entry in various modules/ documents and monitoring thereof, adherence to Business rules, Manuals and Procedures**,** Accounting Standards and various Statutory Acts and Rules.

[4] **Computer Aided Audit Technique.**
[5] **A CAAT tool by Caseware Inc.**
[6] **RDBMS by Microsoft Corporation.**
[7] **Structured Query Language.**

Audit Constraints

2.2.7 Adequate documentations in respect of system requirement, business process, application development, testing and formal acceptance were not available except in the case of Time office, Human resource management and Payroll (THP) application and therefore audit had to depend on interviews with key personnel and end users for information in many cases.

Audit Findings

2.2.8 The following observations highlight that the Company could not achieve optimum maturity level even after ten years from the commencement of the automation project.

Absence of Strategic IT Plan

2.2.8.1 A well established Strategic IT plan would work as a baseline for systematic development of IT infrastructure in a time bound manner to improve the efficiency of the business operations of an enterprise.

The Company did not have any approved and documented IT policy and IT Plan (till April 2009) since initiation of the computerisation project (1999). It was only on 5 May 2009; a formal IT policy paper (signed by CMD) containing only operational procedure was issued and made available to Audit. This did not have the approval of the Board (30 May 2009). Lack of planning has resulted in indefinite continuation of system development process even after completion of 10 years.

The company in its reply (August 2009) stated that IT policy document has been prepared but is yet to be submitted to the Board of Directors.

Deficient System Development

2.2.8.2 No documentation in respect of User Requirement Specification (URS) and System Requirement Specification (SRS) was made in respect of Sales, Purchase, Stores and Finance modules developed in-house by the Company. This led to an ad-hoc system development approach followed by the Company to meet immediate requirements. No document to support formal testing, acceptance and post implementation review of the modules were available.

The Company replied that proper documentations could not be done during initial phases of IT system development due to non-availability of IT infrastructure and IT manpower. However, detailed manuals incorporating user requirement specification and features of each module are under preparation (August 2009).

Inadequate System Security

2.2.8.3 A scrutiny of the system security revealed the following deficiencies:

- User Ids were not programmed for locking up on specified unsuccessful sign-in attempts.
- There was no password policy specifying the structure and length of password, changing of passwords at intervals, secrecy to be maintained etc. As a result, current password length ranged from 2 to 11 characters.
- Users were not forced to change the initial passwords set by DBA. None of the users changed their passwords even after six months.
- It was also seen that User names and passwords for the applications were stored in a user defined table (Muser) without encryption allowing DBA/Programmer to access the table and view all user passwords including that of heads of the department who are the Business Process Owners (BPOs).
- Full version of Application Development Tool (PowerBuilder) including source code was installed at the users end instead of compiled version whereby the user access is restricted to the desired level exposing the application at client machine to the risk of unauthorised access and manipulation of programs by the end users.

The management stated (August 2009) that the security lapses pointed out in audit are being addressed in the proposed IT policy pending approval of Board of Directors and the development tool will be removed after installation of compiled version.

Lapses in System Maintenance

2.2.9 Access to the three basic commands insert, update and delete (DML)[8] for data manipulation in database tables should be granted to selected authorized users at appropriate levels. However, it was observed that all the users were able to run these data manipulation functions without audit trial due to deficient programming (hard coding of database username and password and installation of source code at client side) leading to a serious threat in database management.

2.2.10 According to the Management, the Applications were subjected to version change at least 10 times a year. However, no documented and approved version control procedure was in existence with the result that different departments were using different versions as indicated from the fact that the CENVAT statements generated from the Accounts department was different from the one generated from the version supplied to Auditors.

The Company stated that Users can be prevented from applying DML by installing compiled version of application and removing development tool for

[8] **Data Manipulation Language which can manipulate data.**

which action is in progress. Further, single compiled version for each module is being introduced for version control.

PURCHASE MODULE

2.2.11 The purchase module processes and stores transactions in respect of purchase requests, purchase enquiry processing, quotations, price comparison statements, purchase order etc. An analysis of this module indicated the following deficiencies:

2.2.12 The System did not provide for capturing freight charges as a part of material cost in respect of stores & spares. This was against business rules and requirement under Accounting Standard 2 (AS 2) which states that the cost of inventories should comprise of all costs of purchase incurred in bringing the inventories to their present location and condition. The non-compliance to AS 2 led to continuous qualification by Auditors in their Auditors Report to the shareholders for the last three years.

The management replied that the details of transportation cost of stores and spares were not available in several cases at the time of valuation which is not correct as it indicates management failure in adhering to the requirement of Accounting Standard.

2.2.13 For an efficient scheduling of purchases, lead-time for purchase of each item should be fixed. Though data was available for generating lead-time the system did not provide for a facility for reporting the appropriate time for initiating purchase orders. A test check of purchase orders during 2008-09 revealed that :

i) Out of 2,257 purchase orders issued, 1,700 were initiated through system from request stage and 557 at purchase orders stage. This means, the system provides for initiation of purchase quantity at two different stages which is not proper.
ii) In 1,674 cases out of 1,700 purchase orders issued, the indenting departments indicated that they required the material within 20 to 90 days from the date of requisition.
iii) Only in 60 cases supplies were made in time.
iv) In 241 cases the delivery was done with a delay upto 320 days from user requirement date.
v) In 887 cases, purchase orders were issued after user requirement date, and the supplies were made with a delay upto 663 days.

The management is yet to initiate corrective action.

2.2.14 Though, columns were provided in the purchase indent forms for capturing present stock level, quantities pending quality checks and un-executed quantities against previous purchase orders and the same were available in the system, these were not generated and printed on the indents.

Instead, these were collected from the system and manually filled in exposing the system to the risk of unintended human errors or deliberate manipulations.The Company stated that suitable modifications in the program are being done.

2.2.15 CENVAT credit can be availed by the company on capital goods and raw material inputs based on documents like invoice and bill of entry immediately on receipt of goods in factory. It was observed that:

2.2.16 Even though the system provided for capturing CENVAT eligible materials in the material master (Table MITEM), the database manager failed to update this field with the result that the system was not able to generate automated CENVAT eligible statements based on Stores Inward Book (SIB). As a result credit for CENVAT could not be availed in time (ie. by 5th of next month). The delay in taking CENVAT credit amounting to Rs. 39.06 lakh in 60 out of 7,936 cases during 2008-09 ranged from 35 days to 145 days.

2.2.17 Besides, the Management was deprived of the required information for decision making on the materials for which credit was not taken due to the incomplete data.

STORES MODULE

2.2.18 The stores module maintains records like Stores Inward Book (SIB) and Stores Receipt Notes (SRN), Material Issue Notes (MIN) and generates Stores ledger and other MIS for inventory control. The following deficiencies were noticed during audit:

2.2.19 The system was enabled for FSN (Fast/Slow/Non-moving) analysis of inventory. There were 16 items valued at Rs. 2.33 lakh that continued to be classified as fast moving even though it was non-moving for more than five years. Further, 2,787 items valued at Rs. 7.97 crore were classified as slow moving even though it was non-moving for three to five years as on 31 March 2009. This indicated that FSN Categorisation was not subjected to review during the last several years.

The management replied that action is in progress for FSN categorisation.

2.2.20 As per the decision taken by the Board in its 154th meeting held on 02 September 2002 the value of non-moving stock were to be written off after retaining value of Re.1 per item. The total provision for non-moving inventory was Rs. 1.64 crore (2006-07) which was not reviewed thereafter. The under provision towards non-moving stock in the accounts for 2007-08 was to the extent of Rs. 7.25 crore as indicated below:

Provision required on 31.3.2008 for stock non moving for more than 3 years	Rs. 889.60 lakh
Accumulated provision in accounts	Rs. 164.25 lakh
Under Provision as on 31.3.2008	Rs. 725.35 lakh

Company stated that the non-moving items in the stock includes insurance spares which may be required at any time and in other cases the usability has to be ascertained before making provision. However, the fact remains that the non-moving stock was not reviewed after 2006-07.

2.2.21 In order to reduce the investment on inventory, various control levels such as maximum, minimum and re-order quantity were fixed in the system. However, the dates on which such levels were fixed and parameters applied were not available and the levels once fixed were not subjected to review at all. As a result, inventory levels for stores, spares and fuels increased from Rs. 4,858.93 lakh in 2005-06 to Rs. 6,191.59 lakh in 2007-08. Also, the Company's failure to conduct periodical review of the inventory led to accumulation of non-moving stock to the tune of Rs. 8.89 crore as on 31 March 2008. The management stated that corrective action is being initiated.

SALES MODULE

2.2.22 Sales module processes sales orders. It comprises of two sub-modules - one for domestic and the other for export transactions. However, only 'Domestic sales' module was integrated with finance module. Ledger accounts were automatically posted from sales module and generate documents like Contract Review Record, Dispatch Note, Packing list, Proforma invoices and Commercial invoices. Subsidiary records like Sales register and MIS reports such as monthly off-take, monthly sales analysis etc., were other main outputs.

2.2.23 Export sales module is operated by marketing department. Though the data relating to commercial invoices were available in the system, export invoices were prepared outside the system defeating the very purpose of computerisation. This was due to deficiencies in the database design providing insufficient field length for entering various data items like Vessel/Flight No., Remarks, Port of discharge etc. Non-incorporation of this requirement in the module affected the efficiency in export sale process.

2.2.24 Invoices are created by marketing section against each Dispatch Note. On verification of the database it was noticed that there were two cases of creating more than one invoice against one Dispatch Note as given below.

INVNO	DESPNOTENO	DESPDT	ACCODE	SUBACCODE	AMT	TOTAL	ENT	INVDT
207	DN/202/2009-2010	13/04/2009	3267D101A	3267D101AP	2155102	2155102	JEJ	13/04/2009
208	DN/202/2009-2010	13/04/2009	3267D101A	3267D101AP	2155102	2155102	SE2	13/04/2009
650	DN/652/2004-2005	25/05/2004	3267D159SC	3267D122V	58429.5	58429.5	KKK	25/05/2004
651	DN/652/2004-2005	25/05/2004	3267D159SC	3267D122V	58429.5	58429.5	ANI	25/05/2004

On enquiry it was informed that invoices No: 208 and 651 were duplicate invoices inadvertently generated. Though the duplicate invoices were cancelled in the General Ledger by passing a journal entry, Sales Register generated by the system still showed these duplicates as valid invoices. As a

result, the total of sales register for the month of April 2009 showed an excess sale of Rs. 21,55,102. Also, the MIS 'Sales Register Type wise' showed an excess amount in respect of basic amount, central excise and VAT amount. Moreover, MIS 'Monthly Sales Analysis' showed an excess quantity of 16 MT as lifted by Asian Paints and therefore the MIS itself was giving wrong information involving financial risk as any exaggerated sales quantity may lead to payment of quantity discount at enhanced rates.The duplication of invoice took place on account of lack of system control as it was possible to generate invoices from the same Dispatch note by two persons sitting in two different work stations and therefore requires immediate corrective action.

2.2.25 Where rates were revised in Master table previous rates and rate change details were not available for verifying the correctness of transaction records for sales.

2.2.26 The price master accommodated one rate at a time even when the Company had multiple rates for different customers. It was informed that such situations were handled by changing the rate master just prior to creation of such invoices. The system is exposed to the risk of changing the rate master by end users, which was not appropriate.

The management stated that suitable changes in the program/table structure are being made to address the above deficiencies.

PAYROLL

2.2.27 Payroll of the employees were processed (Batch process) through a COBOL[9] program uploading the inputs (in MS Excel) received from various departments. The program mainly generates documents like pay slip and various statements related to earnings and deductions.

2.2.28 The Company developed (2004) an integrated computer application for Time office, Human resource management and Payroll (THP) by engaging an external agency (OCL Informatic Limited) at a cost of Rs. 2,29,000. The application has three modules namely Time Office, Human Resource and Payroll. Time Office and Human resource modules were implemented (2006) successfully and the same is working satisfactorily. But the Pay roll module was yet to be implemented (April 2009) despite its being ready to use since October 2006. The Company stated that the pay roll module of THP could not be implemented as complexities in pay structure were not envisaged at the time of its development. Thus the failure was due to improper system development documentation.

2.2.29 Apart from people deployed in time office and four officials deployed in accounts section for payroll related work, an Assistant Grade-I of EDP section was exclusively assigned the work of processing payroll by incorporating the inputs received from the various sections. All these manual works were avoidable as all inputs required for processing of salary was

[9] **Acronym for a third generation computer programming language (Common Business Oriented Language).**

already available in THP. Pay & allowances given to Assistant Grade-I (EDP) for last three years were as indicated below.

Year	Salary (Rs.)	Over time (Rs.)	Total (Rs.)
2006-07	2,44,277	50,911	2,95,188
2007-08	2,79,758	75,921	3,55,679
2008-09	3,24,611	97,717	4,22,328
Total	8,48,646	2,24,549	Rs. 10,73,195

Work related to Pay and allowances done at EDP section was avoidable as fully functional user-friendly software was available with the Company, which could be operated directly by users in Accounts/Time Office and Rs. 10.73 lakh saved towards the pay and allowance for data entry staff.

2.2.30 On review of the infrastructure and process of payment of pay and allowances at MS unit of the Company, it was noticed that the unit had infrastructure (Punching machine for attendance, Computers, printers and trained staff) but the management did not take any effort to implement THP application at MS Unit. The Company stated (December 2008) that the scope of implementation of THP software at MS units was being explored. However, no action was taken till date (31 May 2009). In its further reply (August 2009) it was stated that THP as such could not be implemented in MS Unit as it is covered under Mines Act, 1952. The reply is not tenable since the deviations required could have been accommodated in the THP if proper system study was conducted at the time of development of the software.

FINANCE MODULE

2.2.31 Finance module has the provision for journal vouchers, Debit/Credit Note for adjustments and Purchase/Sales returns. This module was integrated with Purchase, Sales and Stores module and generates Ledger accounts and reports like Cash flow statement, Trial Balance, Profit and Loss account and Balance Sheet.

2.2.32 The finance module contains a facility CENVAT ENTRY used for generating CENVAT returns by calling SIBs (Stores Inward Book) from Stores module. But the initial data captured in SIBs did not contain break up of excise elements like Basic Duty, Education Cess and Secondary and Higher Education Cess. So an employee had to be provided additionally for checking the applicable rates and updating the statements which was avoidable had the data been captured initially in the required format. Total avoidable manpower cost on this count worked out to Rs. 6.39 lakh during the period from April 2006 to March 2009. The Company stated that suitable program modifications are being incorporated.

2.2.33 As per the business rules Fixed Assets shall be managed through a Fixed Asset Register. Depreciation shall be calculated on an annual basis and accounted for in this register besides accounting for deletions and additions to

such assets. However, while implementing the module, fixed asset management and depreciation requirements were not provided in the system. Statements for fixed assets were prepared outside the system using MS Excel. Further, the program for drawing up Profit and Loss account and Balance Sheet on any date also could not be utilised by the Company so far on account of the above deficiency in implementation.

The Company stated that the required modifications will be included while developing new system.

2.2.34 The annual accounts (i.e. Profit and Loss account and Balance Sheet) for the year 2007-08 was certified by the statutory auditors on 20 September 2008. As per Accounting Rules all the Ledger accounts are to be closed before certification. However, the accounts were open for modifications even after this date. For instance, 48 journal entries (No: 1367 to 1414) were passed and posted in the accounts upto 26 September 2008 ignoring the Accounting Rules prescribed. Further, the auditor's certificate to the effect that the financial statements were in agreement with the books of accounts of the Company on the date of certification was also found to be wrong on account of the above mentioned deficiencies. The Companies Act, 1956 expressly prohibits alterations in balance of any account after certification, and if done would tantamount to re-opening of accounts.

Even though the system was having provision for closing the accounts, no procedure was fixed and documented for such closure. The Management could not produce any authority regarding the re-opening of final accounts for the year 2007-08 for editing and postings.

The Company stated that due to some technical reasons delay has occurred in closing accounts for posting in 2007-08 and steps would be taken to lock the accounts in time in future.

Management of Bank Accounts

2.2.35 The table created for monitoring banking transactions could not monitor missing cheque numbers and the system was not capable of generating any list of cancelled cheques for effecting proper monitoring/ internal control due to non-incorporation of 'Cheques lot management' features in the system. Company stated that this feature will be added while going in for online system.

2.2.36 A total of 14,369 records were available in the system for 2008-09. Though the field for date of realisation of cheques was provided in the table, this field was not filled except in 2 records, leading to capturing of incomplete data.

2.2.37 In 47 cases of Bank payments, cheque dates were older than voucher date by more than 180 days. Few examples are given below.

Table :TCHEQUES				
ORIGVNO	YEARSET	VDATE	VCHQDDDATE	VAMOUNT
BP9615	11	10/03/2009	08/08/2008	66873
BP7897	11	06/01/2009	02/06/2008	6613
BP9614	11	10/03/2009	14/05/2008	28657
BP7893	11	06/01/2009	10/04/2008	5501

This indicates that these cheques were not supported by vouchers, which is not in order. Reason for not generating vouchers at the time of payment was not available. The system was not designed to ensure that no cheques are prepared without generating a voucher with proper authorisation through the system.

The Company stated that this was due to input error. However Company is yet to initiate remedial measures for ensuring validity of the inputs made in the system.

2.2.38 As on 20 April 2009, as per system 141 transactions in 5 bank accounts pertaining to the period 28 February 2008 to 20 April 2009 with a net debit value of Rs. 5.37 crore were kept unaccounted in the subsidiary/main ledger. This has happened on account of design defects, as the program does not provide for accountal of such items under suspense accounts till its clearance through bank reconciliation. This resulted in generation of distorted monthly financial statements.

2.2.39 Cash Flow Statement was generated based on voucher authorisation dates. Out of total 1,06,067 Bank/Cash vouchers generated during 2007-08 to 2008-09, delays in authorisations of 49,555 cases were noticed. In 199 cases the delay involved was 30 to 60 days and in 42 cases delay was ranging from 91 to 277 days. Delay in authorising Bank/Cash vouchers resulted in unreliable cash flow statement and therefore could not be utilised by the management as a reliable MIS.

The Company stated that the delay was due to advance planning for proper fund management. Reply is not tenable as cash flow statement prepared based on voucher authorisation date would not give reliable information.

2.2.40 As per Accounting Standard- 3 "an enterprise should prepare a cash flow statement and present it for each period for which financial statement is presented. The cash flow statement should report cash flows during the period classified under operating, investing and financing activities". However, the report generated by the Finance module was not in this form and the Finance department was manually preparing it by using MS Excel for annual financial statement.

2.2.41 On review of sub-ledgers data, it was noticed that account No: 3,26,700 (Sundry Debtors – TiO2) was showing debit balance of Rs. 2,40,319.17 from the year 2000-01. However in the place of Account name "???" was entered instead of customer name. Since logs were not available, deliberate correction

carried out could not be ruled out. The Company stated that the balance related to the period prior to 2000-01 for which details of the customer is not available.

2.2.42 Cost accounting and cost audit are mandatory in respect of KMML under section 209 (1) (d) of the Companies Act, 1956. Cost accounting system adopted for determination of cost by the unit was on actual basis. The cost records were prepared based on the financial accounting and books. Though the system provided for 38 cost centres, cost centre-wise booking of expenditure was done only in respect of raw materials. Consumption statements in respect of stores and spares do not represent the actual cost since freight and handling charges were not booked as part of cost of stores and spares. As the initial booking of expenditure other than materials was not cost centre-wise, calculation of depreciation was not programmed in the application and apportionment of expenditure was not incorporated with reference to the accepted basis of apportionment. Cost accounts were written up outside the system on an annual basis just to meet the statutory requirements. Consequently the management could not utilise various MIS reports cost centre-wise / department-wise for decision making and cost reduction plan. This has also resulted in avoidable expenditure on manpower to the extent of Rs. 15.26 lakh (towards salary and allowance for Costing Assistant) for preparation of cost records for the last three years.

The Company stated that action for booking freight and handling charges 'cost centre-wise' has been initiated and possibility for generating cost records through the system is being explored.

The matter was referred to the Government (July 2009), their reply is awaited.

CONCLUSION

Lack of a long term and comprehensive IT policy and need based casual implementation of IT systems resulted in ad-hoc and disintegrated management of the system. An IT system, which can take care of almost all important business processes, is available; but none of the modules is complete and self-supporting requiring human intervention at various stages of the modules defeating the very purpose of computerisation. This has not only caused avoidable expenditure but also affected efficiency, transparency, speed and security badly. Even after lapse of 10 years since the commencement of the project and after spending an amount of Rs. 80 lakh for hardware alone, the Company could not achieve all the business objectives efficiently through computerisation so far. Even now a vision about the integrated IT System and a time bound implementation plan are still lacking and the project is going on without any ending.

RECOMMENDATIONS

i) The Company should frame long term IT Plan and IT directions to optimise resources efficiently.

ii) Initiate action for implementation of integrated software in both TP and MS units with uniform rules to handle identical functions to derive the benefits of enterprise wide information for management decision-making.

iii) Initiate corrective action for removal of program design defects and database level risks.

iv) Create definite procedures for closure of books of accounts to ensure that ledger accounts are not re-opened for postings/editing after certification of accounts by Auditors.

v) Fix Control levels for management of inventory.

vi) Incorporate necessary amendments in program for segregation of tax components in source documents.

vii) Ensure that all modules comply with the business rules and accounting standards wherever required.

viii) Document all essential existing business process and system specification.

ix) Eliminate human intervention completely by suitably modifying the program.

x) Formulate password policy and Business Continuity Plan and circulate among users. Strengthen security of the system by ensuring Physical and logical access controls.

xi) Ensure that the same version of the software is used in all departments.