ANNUAL REPORT
1993-94

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS & FERTILIZERS
DEPARTMNET OF CHEMICALS & PETROCHEMICALS
NEW DELHI

CONTENTS

ANNEXURES

INTRODUCTION

The Department of Chemicals and Petrochemicals has been a part of the Ministry of Chemicals and Fertilizers from 5.7.1991. The Department is entrusted with the responsibility of planning, development and regulation of Chemicals, Petrochemicals and Pharmaceuticals Industries. The business allocated to the Department is listed at Annexure-I.

During the year, the Department was under the charge of the Prime Minister Shri P.V. Narsimha Rao. Shri Ram Lakhan Singh Yadav took over as Minister for Chemicals & Fertilizers w.e.f. 17.2.94.

Shri Eduardo Faleiro held charge as Minister of State w.e.f. 19.1.1993.

Shri K.K. Mathur, held charge as Secretary of the Department throughout the year under Report.

PERFORMANCE OF INDUSTRIES

A. Drugs & Pharmaceuticals

The Drugs and Pharmaceuticals industry in India, during the last 40 years has shown tremendous progress if one takes into consideration the growth rate as seen in other developing countries. This progress has been attained in the field of production of Drug substances, commonly known as bulk drugs, as well as in that of drug formulations. The Indian Pharmaceutical Industry is one of the largest and most advanced amongst the developing nations. This industry is currently in a position to manufacture bulk drugs belonging to several major therapeutic groups requiring various manufacturing processes. Excellent technical facilities have also been developed for production of major dosage forms like tablets, capsules, liquid orals, injectables etc. This singular status of achievement goes alongwith assurance with regard to highest quality of the products. Today, India is in a position to meet 70% of its requirement of bulk drugs and almost all its requirement of formulations.

The Drugs and Pharmaceuticals sector continued to maintain the steady growth in terms of produciton as well as range of products in 1993-94 also. This trend has a positive impact on our efforts towards achieving the National goal of ensuring abundant availability of good quality essential drugs at reasonable prices in the indigenous market. Last year (1992-93) the production of bulk drugs and formulations was to the extent of Rs. 1150 crores and Rs. 6000 crores respectively. This year the production of bulk drugs and formulations is estimated to be of the order of Rs. 1320 crores and Rs. 6900 crores respectively, showing a growth rate of 15% over the previous year's production. In the case of individual drugs, where decrease in production has taken place, it is noted that factors like decline in demand and obsolescene have a significant impact.

Production

The following table shows the production of bulk drugs and formulations from 1985-86 to 1993-94.

Year		Bulk drugs (Rs. in crores)	Formulations (Rs. in crores)
1985-86		416.00	1945.00
1986-87		458.00	2140.00
1987-88		480.00	2350.00
1988-89		550.00	3150.00
1989-90		640.00	3420.00
1990-91		730.00	3840.00
1991-92		900.00	4800.00
1992-93		1150.00	6000.00
1993-94	(Estimated)	1320.00	6900.00

The estimated demand and production achievement of Drugs and Pharmaceuticals is given in Annexure-II.

The Pharmaceutical Industry in India today has the capability of producing a wide range of bulk drugs, covering a large spectrum of technologies and almost all formulations. In fact, the country is almost fully self-reliant in terms of formulation technology. In the case of bulk drugs, the technologies include those for Sulpha drugs, Vitamins, Hormones and a number of new synthetic drugs like Flumequine, Pefloxacin, Ramipiril, Ketorolac, Lisinopirl etc.

Among the bulk drugs which are critical to the country's health needs, the two most important ones are Penicillin and Rifampicin. Penicillin is being manufactured in the country mainly by the two PSUs-IDPL and HAL. However taking into consideration the growing need for this drug, it was dereserved from the public sector and seven private sector companies were given Industrial approvals for its manufacture. Some of them have made progress in implementing their project. The two PSUs have also progressively enhanced their production to meet upto 40% of the country's demand. A third producer viz. M/s Alembic Chemicals Pvt. Ltd. has enhanced its production.

The country has for a number of years been on the look out for a technology for the manufacture of Rifampicin from the basic stage of fermentation. The

indigenous need for this drug was being met through manufacture from penultimates and intermediates. M/s. Gujarat Themis Biosyn Ltd. has commenced the basic stage manufacture of this drug from fermentation process. M/s. Lupin Chemicals has also started manufacture from basic stage.

During 1993 several proposals for establishing new undertakings/expansion of existing units/manufacture of new articles in the existing units have been received. A total number of 220 letters of intent for manufacture of various bulk drugs/drugs intermediates/formulations with an envisaged investment of about Rs. 1450 crores have been issued. 32 letters of intent involving an investment of about Rs. 200 crores have also been considered for conversion and industrial licences granted. The major items of production for which industrial licences have been granted include Pen. G. Rifampicin. other bulk drugs. Interavenous fluids. formulations etc.

It is worth mentioning that Indian Research has led to cost effective production of a wide range of products such as Methyldopa. Paracetamol, Ibuprofen. Aspirin. Ampicillin etc. and a host of other items. The process improvement achieved in these areas is internationally competitive. with the result that most of these products have found markets even in advanced countries like the USA. Germany etc. Many of the Indian companies have the technology for cost effective production of a variety of items. These companies would also be interested in setting up joint ventures. List of certain Bulk Drugs for whose production technology is available is given below :—

S. No.	Bulk Drug	Company
1.	Chloramphenicol (Powder & Palmitate)	Boehringer Knoll. Parke Davis
2.	Ampicillin/Amoxycillin	Ranbaxy. Max (India).
3.	Sulphamethoxazole	Standard Organics
4.	Sulphadimidine	Indian Drugs & Pharmaceuticals Ltd.
5.	Sulphacetamide/Sodium	Indian Drugs & Pharmaceuticals Ltd. East India.
6.	Analgin	Indian Drugs & Pharmaceuticals Ltd.
7.	Oxyphenbutazone	Ambalal Sarabhai Entp.
8.	PAS & Salts	IDPL
9.	Isoniazid	Chemo Pharma.
10.	Thiacetazone	Unichem Labs.. IDPL
11.	Ethambutol (from DL-2 Aminobutanol)	Lupin. Themis Chemicals
13.	Chloroquin	Ranbaxy. IDPL
14.	Amodiaquin	Parke Davis. Suneeta Chemicals
15.	Metronidazole	Unique Chemicals. Methroni Drugs
16.	Tinidazole	Unique Chemicals. Metroni Drugs
17.	Diloxanide Furoate	Cipla
18.	Chlorpropamide	Albert David. IDPL
19.	Tolbutamide	Suneeta Chemicals
20.	Mebandazole	Cipla
21.	Diethyl Carbamazine Citrate	Chemo Pharma. Burroughs Wellcome
22.	Epedrine	Nalladi Drugs
23.	Hydroxyethyl Theophylline	Cipla
24.	Phenobarbitone	Indian Drugs & Pharmaceuticals Ltd.
25.	Neringidope. Norfloxacin	Dr. Reddy's Laboratories
26.	Ibuprufen	Cheminor Drugs
27.	Ciprofloxacin	Ranbaxy Laboratories

Export

From a meagre Rs. 46.38 crores export of pharmaceuticals in 1980-81, the exports have risen to over Rs. 1,400 crores during last year. Since 1988-89, India has emerged as a net exporter of pharmaceuticals. Bulk drugs constitute about 60% of exports. The latest trend shows that the formulations are fast picking up. The details of the exports (excluding Castor Oil) during the years are as follows :—

(Rs. crores)

	Finished Formulations	%	Bulk Drugs	%	Total
1965-66	1.16	(38)	1.89	(62)	3.05
1980-81	35.10	(76)	11.28	(24)	46.38
1981-82	69.34	(82)	15.45	(18)	84.79
1982-83	54.60	(83)	11.34	(17)	65.94
1983-84	61.46	(77)	18.46	(23)	79.92
1984-85	99.50	(77)	29.25	(23)	128.75
1985-86	106.59	(76)	33.36	(24)	139.95
1986-87	102.12	(54)	87.16	(46)	189.28
1987-88	88.25	(39)	139.71	(61)	227.96
1988-89	157.29	(39)	242.87	(61)	400.16
1989-90	314.20	(47)	350.50	(53)	664.70
1990-91	371.40	(47)	413.40	(53)	784.80
1991-92	558.50	(44)	722.60	(56)	1281.10
1992-93	553.7	(39)	856.06	(61)	1410.03

The exports have shown increase both in dollar terms and rupee terms during this year (April-December, 1993) as given below :—

(Value in Million US Dollar)

	April/Dec. 1993	April/Dec. 1992	Percentage Charge 93/92
Bulk Drugs	222.2 (711.0)	211.0 (606.2)	+5.3 (+17.3)
Formulations	153.2 (490.2)	114.0 (355.9)	+34.4 (+37.7)
Total	375.4 (1201.2)	325.0 (962.1)	+15.5 (+24.9)

(Figures in brackets refer to value in crores Rs.)

Source : CHEMEXIL

The emphasis on quality and good manufacturing practices in the pharmaceutical sector has paid rich dividends today and Indian products are being exported to a large number of countries including countries like USA, Canada, West Germany, UK, France etc. The drugs which are being exported, range from phytochemicals to synthetic, semi-synthetic, and fermentation based drugs. Besides, most of the major drugs in the world are being manufactured in India both by trans-national corporations and Indian companies. The prices and the quality of these drugs are internationally competitive. Therefore, there is great scope for export of such pharmaceutical items from India. An indicative list of items which are being exported is given below :—

1. Chloramphenicol Powder
2. Ampicillin
3. Cephalexin
4. Sulphamethoxazole
5. Sulphadimidine
6. Folic Acid
7. Analgin
8. Aspirin
9. Ibuprofen
10. Paracetamol
11. Ethambutol
12. Pyrazinamide
13. Chloroquin
14. Metronidazole
15. Mebendazole
16. Diazepam
17. Trimethoprim
18. Nifedipine
19. Menthol
20. Proprietory & Patent Medicines.

2—794 M/o C & F/93

Import of Technology

The areas where India requires technology upgradation and infusion of new technology are Betalactum antibiotics. latest generation drugs like Cephalosporins. Rifampicin etc. India is also interested in upgrading technologies for traditional antibiotics such as Penicillin. and other items like Dapsone. In such areas import of technology and setting up of joint ventures in India is possible.

The foreign collaborations approved for important drugs during 1993 (the period upto November, 93) include the following:

1. Soft Gellatine Capsules.
2. Amoxycillin.
3. Amimovit.
4. Penicillin-G.
5. Cefuroxime Sodium.
6. Cefotaxime Sodium.
7. 7-Amino Cephalosproanic Acid.

The following multinationals increased their equity to 51%.

1. M/s. Glaxo
2. M/s. E. Merck
3. M/s. Reckitt & Colman
4. M/s. Procter and Gamble
5. M/s. Hoechst (under consideration)

The following disinvested their equity:—

1. M/s. Nicholas
2. M/s. Merind
3. M/s. Roche
4. M/s. Searle.

The reasons cited for disinvestment include interalia the pricing system. lack of patent protection. advantages in entering into licensing arrangements with local Indian Companies rather than direct investment etc.

Drug Policy Review

The Drug Policy 1986 which was under review with the objective of further rationalising and simplifying the price control systems. and also bringing the policy in tune with the new Industrial Policy announced in July, 1991, was discussed in both the Houses of Parliament in its Monsoon Session in 1993. The views and concerns expressed by the Members of both the Houses during the discussions would be kept in view while finalising The Review of The Drug Policy.

Drug Pricing

There are about 500 bulk drugs which are consumed in the country, out of which about 350 bulk drugs are produced in our country and the rest of the bulk drugs are being imported from other countries. The prices of bulk drugs and formulations are regulated as per the provisions of the Drugs (Price Control) Order (DPCO), 1987. At present 143 bulk drugs and their formulations are under price control. With the view to further rationalise and simplify the system all aspects relating to price control on drugs are under review as part of the review of Drug Policy 1986.

To encourage indigenous research and development in the field of drugs. one of the schemes of the Government is to exempt bulk drugs. and formulations based thereupon, from price control in favour of a particular manufacturing unit who has indigenously developed/improved the process to manufacture it from the basic stage.

So far the following bulk drugs and their formulations have been granted exemption from price control under DPCO, 1987 for a period of 5 years from the date of commencement of their commercial production on the grounds of indigenous Research and Development:—

S. No.	Name of the Bulk Drug	Name of the Company
1.	Nalidixic Acid	M/s. Ranbaxy
2.	Dextropoxyphene	M/s. Wockhardt
3.	Ephedrine	M/s. Malladi Drugs
4.	Amoxycillin Sodium	M/s. Duphar Interfran Ltd.
5.	Naproxen	M/s. Rallies

S. No.	Name of the Bulk Drug	Name of the Company
6.	Theophylline	M/s. Pefco Industries Ltd.
7.	Metoclopramide	M/s. IPCA Labs.
8.	Povidine Iodine	M/s. Wockhardt
9.	Salbutamol	M/s. Cipla
10.	Ranitidine	M/s. Globe Organics
11.	Ranitidine	M/s. Ranbaxy
12.	M/s. Verapamil Hcl.	M/s. Associated Drugs Company Pvt. Ltd.
13.	Betamethasone Sod. Phosphate	M/s. Glaxo
14.	Metoclopramide	M/s. Infar
15.	Timolol Maleate	M/s. FDC Ltd.
16.	Glipimide	M/s. U. S. Vitamins.

Another incentive scheme to encourage the indigenous research and development in the field of drugs and formulations is to grant exemption from the Drugs (Price Control) Order, 1987 in favour of a manufacturing unit in respect of its formulation having a New Delivery System developed by the concerned formulating unit indigenously and certified by the Drug Controller (India). The following formulations have so far been allowed exemption from price control under DPCO, 1987 for a period of 3 years from the date of approval by the Government :—

S. No.	Name of the formulation	Name of the Company
1.	Diclonac Sustained Release Tablets	M/s. Lupin in Labs. Ltd. Bombay
2.	Terramycin L/A	M/s. Pfizer Ltd. Bombay
3.	Norwal 600 mg sustained release Tabs	M/s. Cadila Labs. Ltd., Ahmedabad
4.	Felol-Spansule sustained release Caps	M/s. Eskayef Ltd. Bangalore
5.	Isoptin 240 mg sustained release Tabs.	M/s. Boehringer Knoll Ltd., Bombay
6.	Theo PA Control release Tabs.	M/s. Nucron Pharma (Pvt.) Ltd., Pune
7.	Ketroprofan (Profenid) Controlled Release Capsules 100 mg (containing Ketoprofen 100 mg)	M/s. Themis Labs. Bombay
8.	Premobil SR Capsules (Containing 300 Mg Ibuprofen)	M/s. Biological E. Ltd., Hyderabad
9.	*Calaptin 120 (Containing Isoptin 120 mg) Sustained Release Tablets.	M/s. Boehringer Manheim Ltd., Bombay.

*Co-terminus with Item No. 5 above.

Our National Health Policy has accepted the goal of "Health for all by the year 2000 AD". On the basis of the population growth and the growth in the health infrastructure, it is anticipated that by the turn of the century,medicines worth Rs. 1,55,500 millions will be required. This kind of demand shows that the increase in demand from the 1980-81 level will be at the cumulative rate of 14.4% per annum. To meet this gigantic demand necessary policy support for attracting more investment in pharmaceutical sector has already been given. Besides, liberal policy measures are being announced from time to time depending upon the changing circumstances. Given the present trend of investment in this sector and the growth it has registered so far, it is expected that the pharmaceutical sector of the country will be able to meet this challenge and not only produce the quantities of pharmaceuticals required for our population but also be able to export large quantities to other countries of the world.

National Institute of Pharmaceutical Education & Research (NIPER)

The Government of India is setting up a National Institute of Pharmaceutical Education & Research (NIPER) at an initial investment of Rs. 250 million. The Institute is being located in about 130 acres of land made available, free of cost by the Government of Punjab in Sector-67 of SAS Nagar (Mohali) adjoining Chandigarh. The Institute was registered as a Society under the Societies' Registration Act on 27th February 1991.

The proposed Institute will have, in the first phase, as many as 10 functional and teaching departments and laboratories, namely, the department of medicinal chemistry, natural products, pharmaceutical analysis, pharmaceutical technology, pharmaceutical management, community and institutional pharmacy, pharmacology and toxicology, bio-technology, curriculam and media development and allied subjects. Facilities

such as instrumentation laboratory, library, computer room, animal house, workshop etc., will also be there. The Institute will have Master's Degree Courses (M. Pharm), Doctorate Courses and Post-Doctorate Research in Pharmaceutical Sciences. The Institute will endeavour to promote excellence in pharmaceutical education and research, and ultimately help in toning up the academic, profesional and industrial functioning in the country. The setting up of NIPER fulfils a demand of several decades by the Indian pharmaceutical industry and profession. It will be the first national level Institute in India in the pharmaceutical sciences and it is proposed to have it declared as an Institution of National Importance like I.I.Ts.

The 1st phase of the project is scheduled for completion in early 1995.

B. Chemicals, Pesticides and Allied Industries

The Chemical Industry in India is well established. The country has recorded a rapid growth in the manufacture of chemicals during the last few years. Prominent among these are Caustic Soda, Soda Ash, Carbon Black, Phenol, Acetic Acid, Methanol and Azo Dyes. The production availability of chemicals is by and large sufficient, and imports have been curtailed. However, some of the inputs for the indusry are in short supply. In certain cases of chemicals, existing capacity is not sufficient to meet the demand, for example, Titanium Dioxide, Citric Acid, MDI and TDI.

The main thrust in the Chemical Sector is modernisation so as to improve efficiency by lowering operating costs since technology obsolescence is one of the prominent features of chemical sector.

Impact of New Industrial Policy

The Governent embarked on the path of economy liberalisation and integration of Indian economy with the global economy two years ago and this process is still continuing. The liberalised industrial policy laid the foundation for increasing competitive export base and for encouraging foreign investment in high technology areas. It is expected that closely held technologies in Hydrogen Peroxide, Citric Acid, Titanium Dioxide, MDI and TDI would now be available. This will further reduce the import dependence of the chemicals in the near future. A high degree of self-reliance in a large number of items, raw materials, intermediates, finished goods has been achieved. New growth centres of industrial activity have emerged, as also a new generation of enterpreneurs. A large number of engineers, technicians and skilled workers have also been trained. The accent was on opening the domestic market to increased competition and readying our industry to stand on its own in the face of international competition.

Industrial licensing has been done away with for all industries except a small list of hazardous chemicals. Enterpreneurs are, therefore, now free to set up chemical industries, by following the Industrial Entrepreneur's Memorandum route. The New Policy envisages automatic clearance of capital goods import, if foreign exchange cost is met by foreign equity or from open market.

With the increase in the foreign investment limit from 40% to 51%, inflow of improved/state of art technology for chemicals, agro-chemicals, in particular, and pharmaceuticals into India, is expected.

The current Import-Export Policy 1992-27 eliminates licensing, quantitative restrictions and other regulatory discretionary controls. Majority of chemicals now can be freely imported or exported through simplified procedures.

Perspective Planning

The Department of Chemicals and Petrochemicals has prepared a perspective plan for the chemical industry upto year 2000 AD which includes new capacity to be generated, R&D inputs required, safety and environmental aspects. Substantial additional capacities have been licensed to meet the increasing demand of chemicals during the 8th Plan. In the last two Union Budgets, a number of incentives have been given by rationalising tariff structure on pesticides and intermediates in order to encourage more production of pesticides within the country cost effectively.

A review of the actual production during 1992-93 and the likely production in 1993-94 for important chemicals is given below :—

Inorganic Chemicals

The inorganic chemical industry constitutes a major sector of the country's economy. Important inorganic chemicals are Soda Ash, Caustic Soda, Carbon Black and Calcium Carbide.

Soda Ash

The current annual installed capacity of Soda Ash in the country is 16.24 lakh tonnes. Its production during 1992-93 was of the order of 13.51 lakh tonnes which is expected to increase to around 14.00 lakh tonnes during 1993-94. This will take care of the indigenous demand.

Caustic Soda

The current annual installed capacity of Caustic Soda in the country is 13.00 lakh tonnes. Approximately 10 per cent of the capacity uses Membrane Cell Technology. The production of Caustic Soda in 1992-93 was 10.85 lakh tonnes. The estimated production during 1993-94 is likely to be 10.90 lakh tonnes.

Carbon Black

The current annual installed capacity of carbon black is 2.17 lakh tonnes. Production of this item during 1992-93 was 1.55 lakh tonnes and the production for 1993-94 is estimated to be over 1.60 lakh tonnes.

Calcium Carbide

The current annual installed capacity of Calcium Carbide is 1.5 lakh tonnes. Calcium Carbide is a highly power intensive industry and its production is. therefore. dependent upon the availability of power in the States where these plants are located. The production of this item during 1992-93 was0.95 lakh tonnes and the production during 1993-94 is estimated to be 0.98 lakh tonnes.

Dyes and Dyestuffs

Dyestuff Industry provides important inputs to many consuming industries contributing to the national economy. It is capable of meeting most of the local demands. In the organised sector. the indsutry is self-sufficient in terms of most of the inputs. There are around 50 units in the organised sector having a total installed capacity of 38,900 tonnes per annum against which the production achieved during 1992-93 was 25,600 tonnes. The production for various classes of dyestuffs in 1993-94 is estimated to be 26,890 tonnes. A large quantity of dyes and dye-intermediates is being exported and valuable foreign exchange being earned in this sector.

Pesticides

Pesticides including insecticides. fungicides, weedicides. etc. are used extensively in Indian agriculture and public health. The pesticide industry in India has made impressive progress and today more than 60 technical grade pesticides are being successfully manufactured in the country. Some 125 units are currently engaged in the manufacture of these technical grade pesticides and over 500 units are making pesticide formulations. As a reult of the increased production of pesticides in the country, import of technical grade pesticides has come down considerably. The estimated production of technical pesticides during 1993-94 is over 75.000 MT from an annual installed capacity of 1.25 lakh MT. As compared to this. the production during 1992-93 was around 72.500 M.T.

In order to use the idle capacity available with pesticide units. the country has been able to enter the competitive field of export of pesticides. During 1991-92. the country has exported pesticides valued at Rs. 213.4 crores. This has increased to Rs. 281.3 crores during 1992-93.

The country has started producing some new pesticides but are continuing to import their intermediates in the absence of technology for producing them. Efforts are being made to acquire the right technology to manufacture intermediates for pesticides like Butachlor. Endosulfan. etc.

The capacity and production of some of the important technical pesticides during the year 1992-93 and 1993-94 are as under :—

(Qty. 000 tonnes)

Item	1992-93		1993-94	
	Cap.	Prodn.	Cap.	Prodn. (Est.)
Malathion	7.6	2.3	7.6	2.4
Methyl Parathion	4.5	2.1	4.5	2.2
Dimethoate	2.2	2.2	2.2	2.4
D.D.V.P.	2.3	1.7	2.3	2.0
Monocrotophos	8.5	6.2	8.5	6.5
Phorate	3.7	3.2	3.7	3.5
Mancozeb	4.0	3.6	4.0	4.0
Isoproturon	3.1	2.1	3.1	2.5
Aluminium Phosphate	1.3	1.0	1.3	1.1

Exports

Till 1987-88. country was not able to export chemicals in larger quantities because of high cost of production of chemicals in India as compared to international prices. However. due to upgradation of technology, support given by Government for exports by Indian Chemical Industry. chemicals have shown an impressive perfomance in the field of exports. The table below gives the export figures of chemicals at a glance from 1987-88 to 1992-93 :

Sl. No.	Year	Value (in Rs. crores)
1.	1987-88	783
2.	1988-89	1248
3.	1989-90	2118.8
4.	1990-91	1907.1
5.	1991-92	3114.2
6.	1992-93	3475.5

Alcohol and Molasses

In keeping with the policy of economic liberalisation, the price and movement controls on molasses and alcohol have been removed w.e.f. the 10th June, 1993. This would ensure maximum utilisation of capacity in both the alcohol manufacturing sector and the sector utilising alcohol for downstream products like Acetic Acid, Acetic Anhydride etc. Moreover, this is likely to improve the viability of the sugar units who may be able to pay better prices for sugar cane to farmers. State Governments are being persuaded for implementation of the policy of decontrol in their states and for that matter, meetings were held with the Excise Secretaries/Excise Commissioners on 5-10-93 and with Excise Ministers on 4-11-93.

In order to check undue increase in prices of industrial alcohol, customs duty on import of denatured alcohol has been reduced to 10% with effect from 20th October, 1993.

C. Petrochemicals Industry

Petrochemicals are chemicals manufactured from petroleum feedstock, such as naphtha, gas etc. Basic chemicals, such as ethylene, propylene and butadiene are manufactured from naphtha. Ethylene and propylene are converted into plastics which are also known as polymers. Butadiene is converted into synthetic rubbers.

The other set of chemicals manufactured from naphtha are basic aromatic chemicals, such as benzene and xylenes. These are used for making intermediates, such as Caprolactum and DMT/PTA. These intermediates are used for production of synthetic fibres and yarns, such as Nylon Filament Yarn (from Caprolactum) and Polyster Fibre and Yarns (from DMT/PTA).

Kerosene is another petroleum fraction which is used for making Linear Alkyl Benzene (LAB), which is the raw material for detergent powder and cakes.

Petrochemicals can be broadly categorised as :—

(i) Plastics
(ii) Synthetic Rubbers
(iii) Synthetic Fibres
(iv) Intermediates (DMT, PTA, etc.,)
(v) Feedstocks (Ethylene, Propelene, Benzene, etc.)

Major Petrochemicals Complexes being set up

To meet the growing demand of petrochemicals in the country, Government have sanctioned several mega petrochemical complexes as follows :—

Olefin Complexes

Project	Feedstock	Ethylene CAP (000 MT)	Investment (Rs. Crores)
IPCL-Gandhar	Gas	300	3500
Reliance-Hazira	Natural Gas (Liquid)	400	4000
GAIL-Auriya	Gas	300	3500
Assam	Gas/Naphtha	300	3500
Haldia	Naptha	300	3500
Vizag	Naptha	300	3500

Aromatic Complexes

Project	Feedstock	Capacity (000 MT)	Investment (Rs. Crores)
JK Petromechemicals	Naphtha	140 P-Xylene 200 PTA	2000
NAPCO	Naphtha	140 P-Xylene 200 PTA	2000

These projects involve a total investment of about Rs. 25.000 crores. if all of them materialise in the next few years. This would mean that India will become largely self-sufficient in petro-chemicals.

Capacities and Consumption Trends

Petrochemical Sector in India has made rapid strides in terms of growth in production and consumption. Broad details in this regard are as under :—

(Figs. in '000 MTs)

Category	1979-80		1990-91		2000 AD	
Polymers	Cap.	Consm.	Cap.	Consm.	Cap.	Consm.
Polymers	296	247	481	892	2370	2497
Elastomers	60	42	72	105	200	294
Aromatics	177	165	315	357	*	*
Other Chemicals	108	119	487	374	831	945
Syn. Fibres	116	88	588	454	833	1176
Intermediates	109	90	655	791	2119	2198
Total :	866	751	2958	2973	6353	7110

*Includes in Intermediates for 2000 AD Projections.

1. Polymers : LDPE. LLDPE. HDPE. PP. PVC. Polystyrene.
2. Elastomers : Synthetic fibres like SBR. PBR.
3. Aromatics : Ortho-xylene. Benzene. Toluene.
4. Other Chemicals : LAB. EO. Methanol. Phenol.
5. Synthetic Fibres : PSF. PFY. NFY. AF
6. Intermediates : Para-xylene. DMT. PTA. MEG. ACN, Caprolactum

The production of major petrochemical items during 1992-93. targetted and anticipated production during 1993-94 and projected production for 1994-95 are given in Annexure-IV.

Customs duties on various petrochemicals were reduced as part of overall economic reforms in the Annual Budget 1993-94. A no. of steps have been taken by the Deptt. with a view to providing level playing field to the domestic petrochemical production as also to preserve the health of the local industry. Some of the major steps taken in this regard are as under :—

(1) Petrochemical items such as LDPE. LLDPE. HDPE. PP. PVC and SBR have been put under the sensitive list for import against value based advanced licences as recommended by the Department.

(2) Imports of feed stocks like. Naphtha, LPG and Kerosene were decanalised. Logistics for import of both naphtha and LPG are since available with the oil companies, the benefit for decanalisation is yet to the passed fully to the industry, till these facilities are set up.

(3) Due to cheaper imports of products like PVC. Polyestyrene. HDPE. PP SBR. etc.. representations were received from the industry for imposition of anti-dumping duty on these products. PVC was the first case where Ministry of Commerce. the nodal agency has levied anti-dumping duty.

(4) An expert group on petrochemicals under the Chairmanship of Dr. Rakesh Mohan. Economic Adviser, Ministry of Industry has been set up to look at the perspective of the Petro-chemical sector in the areas of demand supply. tariffs. import-exports. feed stocks. technology. manpower. environment. etc. The Final Report of the Group is expected to be ready shortly.

Bhopal Gas Disaster

The review petitions challenging the settlement Order were disposed of by the Supreme Court by upholding the settlement. The process of adjudication and determination of compensation commenced in February. '92. The Govt. have sanctioned 56 courts for

adjudication and payment of compensation so that each ward in the Bhopal city could have one court to decide the cases. So far 36 courts of Deputy Commissioners are functioning. The High Court of M.P. have been requested to release additional judicial officers so that the remaining courts could be established. The courts have taken up death cases first. Out of 15.310 death claims received so far from the State Government as on 31-01-1994. 9999 claims have been adjudicated out of which compensation has been awarded to 4752 claims. The remaining cases have been rejected. The total amount of compensation awarded on these cases amounts to Rs. 46.25 crores. 13127 injury cases have also been disposed of. Awards have been given in 12.592 cases and the amount awarded is Rs. 36.81 crores.

After the 1st Phase of interim relief payment was over on 31-03-1993, the Govt. agreed to make payment of Interim Relief of Rs. 200/- p.m. in the 36 severely affected Municipal wards of Bhopal in the second phase from 1-6-93. This Interim Relief is payable to all the residents of the 36 wards except income-tax payees. sales-tax payees. wealth-tax payees. property tax payees. Govt. servants and employees of the Public Sector Undertakings. This interim relief is being paid under the orders of the Supreme Court from the interest of the compensation amount with the Reserve Bank of India (RBI). The Govt. have agreed to recoup this amount as and when required by the corpus fund for payment of compensation.

The Supreme court. in its order dt. 3-10-91. had directed the construction of a 500 bed hospital for the victims at Bhopal to be funded by M/s. UCC/UCIL. M/s. UCC has pledged its shares to a trust in London for selling these shares and making available the amount for the construction of the hospital. These shares were attached by the Chief Judicial Magistrate at Bhopal for procuring the attendance of corporate entities. who are accused in the criminal case at Bhopal.

The Supreme Court has now released from attachment these shares for sale to enable funding of the hospital. This would provide Rs. 60 crores for construction and operation of a hospital with 200 beds. The amount for the hospital would be made available through the trust set up by M/s. UCC in London and the amount for the hospital would be kept in a bank in India. The remaining amount would be held under attachment in India, till the attachment proceedings relaing to the criminal case are disposed of.

The Govt. of India have constituted a High Level Co-ordination Committee under the Chairmanship of the retired Supreme Court Judge, Justice N.M. Kasliwal and consisting of the Welfare Commissioner, Secretaries to the Deptt. of C&PC. Law & Justice, Deptt. of Expenditure and the Chief Secretary, Govt. of M.P. as its members. This High Level Committee is expected to smoothen the functioning of the work of disbursement of the compensation amount of the claimants.

PUBLIC SECTOR PERFORMANCE

A. Drugs & Pharmaceuticals undertakings

I. Indian Drugs & Pharmaceuticals Ltd.

Indian Drugs & Pharmaceuticals Limited (IDPL), the largest Public Sector unit in the Drug Sector, was incorporated under the Companies Act 1956 on 5th April, 1961. It has five manufacturing plants and three subsidiary units. The manufacturing units are located at Rishikesh for manufacture of antibiotics; Hyderabad for manufacture of synthetic drugs; Madras for Surgical Instruments and formulations; Gurgaon for formulations and Muzaffarpur for drugs & chemical intermediates. The three subsidiaries are located in the States of Rajasthan, Uttar Pradesh and Orissa in collaboration with the respective State Governments. IDPL has played a pioneering role in developing an indigenous Drug Industry-base in the country through its Research & Development and absorption & assimilation of technologies for the manufacture of bulk drugs from basic stages using multi-stage complex technologies. The infrastructure created at IDPL plants has acted as a catalyst for the evolution of pharmaceutical industry in the country.

Production/sales Performance During 1992-93

The production and sales during the year 1992-93 was of the order of Rs. 178.00 crores and Rs. 164.00 crores as compared to Rs. 154.12 crores and Rs. 166.48 crores respectively during the year 1991-92. The growth in production during 1992-93 was 16% over the previous year.

The company had to pass through a severe liquidity crisis during April, 1992 to November, 1992. Therefore, the performance of the company has to be seen in the context of the fact that the company had limited resources and had to curtail its operations. In this situation, relentless efforts by the Company were made to organise commercial advances from customers for key bulk drugs and partly for formulations from stockist net-work for premier brands coupled with reduction in inventories and debtors, intercorporate loans and stretching the creditors particularly major Electricity Boards & Sales Tax Authorities to keep up the 'Holding-on' operations.

The Non-plan assistance of Rs. 15.0 crores provided subsequently was judiciously used to step-up production to Rs. 178.00 crores. As a result, the trend of losses was arrested and reversed. The net loss was reduced by Rs. 27.0 crores during 1992-93 (Rs. 83.44 crores) as compared to 1991-92 (Rs. 110.51 crores) by relentless management efforts.

During the year, technological improvements were made in respect of Penicillin, Streptomycin & Oxytetracycline. The company also made quality upgradation in bulk drugs and exported Rs. 134 lakhs worth of bulk drugs mainly to developed countries like USA, Japan, Germany etc. The export has increased by 24% over the previous year.

The technology for Novoldiamine—an intermediate for antimalarial drug, Chloroquine was developed. The company also developed the technology for the basic production of Sodium Antimony Gluconate for Kala Azar and commenced the production.

The main problems affecting the production of the company were shortage of raw materials & packing materials due to liquidity crunch faced by the company, interruption in power supply and transportation problems due to repeated Bandhs/agitations thereby resulting in stock out of raw materials.

Statutory reference to BIFR and revival plan for the Company

As per the statutory requirements, IDPL was declared on 12-8-1992 as sick industrial company by BIFR under Section 3(1)(O) of the Sick Industrial Companies (Special Provisions) Act, 1985. A Revival Package was prepared and the same has been scrutinized by an independent Financial Institution—IDBI which is under consideration of the Government/BIFR.

In order to rationalise the manpower as per the current needs of the Company, a Voluntary Retirement Scheme (VRS) was introduced in 1991-92. There has been favourable response to this programme and its smooth implementation for more than 1,600 employees so far.

Performance during 1993-94

The value of production of IDPL during the period April-September. 1993 has been Rs. 82.10 crores as compared to Rs. 68.89 crores during the corresponding period of previous year. achieving a growth of 19%. The sales during April-September. 1993 amounted to Rs. 76.20 crores as compared to Rs. 68.68 crores during corresponding period of previous year with a growth of 11%. The net loss during 1993-94 has also been reduced by Rs. 7.59 crores from 1992-93 (April to September).

Joint Sector Subsidiaries :

A. Uttar Pradesh Drugs & Pharmaceuticals Co. Ltd., Lucknow

This company was set up in 1978 in collaboration with Pradeshia Industrial & Investment Corporation of Uttar Pradesh (PIICUP). The plant was commissioned in October. 1979. IDPL has 51% shareholding of this Company. The value of production of this Company during 1992-93 was Rs. 1.86 crores as compared to Rs. 5.55 crores during 1991-92. Its sales during 1992-93 were Rs. 2.28 crores as compared to Rs. 5.72 crores during previous year.

The Company submitted a revival package for consideration of the BIFR which was considered on 30-12-1992. The BIFR had concluded that the company had become sick industrial company as per section 3(1)(O) of SICA and granted time upto 31-3-1993 for submission of agreed package for its revival under section 17(2) of SICA. The revised revival package was considered by BIFR on 24-9-1993 and then IDBI was appointed as the Operating Agency which has to submit its report within 90 days from 24-9-1993.

B. Rajasthan Drugs & Pharmaceuticals Limited, Jaipur

This Company was incorporated in August. 1978 in collaboration with Rajasthan Industrial Investment Corporation (RIICO). The plant was commissioned for production in April. 1981. IDPL holds 51% share in equity capital of this Company. The production and sales during 1992-93 were of the value of Rs. 3.90 crores and Rs. 6.43 crores as compared to Rs. 4.10 crores and Rs. 6.02 crores during 1991-92 respectively. The net loss during 1992-93 was Rs. 18.81 lakhs against Rs. 12.81 lakhs during the previous year.

C. Orissa Drugs & Chemicals Ltd., Bhubaneswar

The Company was incorporated on 1st May. 1979 in collaboration with Industrial Promotion & Investment Corporation of Orissa Ltd. (IPICOL) and was fully commissioned for production in September. 1983. IDPL holds 51% share in the equity capital of this Company. Value of production during 1992-93 was Rs. 99.33 lakhs as compared to Rs. 70 lakhs during 1991-92. The sales during 1992-93 amounted to Rs. 129.61 lakhs against Rs. 98 lakhs during 1991-92. The company has been referred to BIFR in July. 1992 which has declared it as a sick company as per Section 3(1)(O) of Sick Industrial Companies (Special Provisions) Act. 1985 in the hearing held on 26-10-92.

The BIFR has appointed Industrial Bank of India (IDBI) as the Operating Agency (OA) for ODCL. The OA prepared the revival scheme which was discussed by the BIFR on 24-5-93. As per the latest directives of the BIFR. the promoters. State Government. Bank. financial Institution. workers and others have to agree for certain reliefs. concessions. sacrifices and additional equity participation to make the Revival Plan viable.

Energy Conservation Measures

The manufacturing of antibiotics and bulk drugs is energy intensive. The cost of energy constitutes about 20% of the total input costs. In view of this. continuous efforts are being made by way of monitoring as in-house efforts. seeking consultancy from outside agencies like NEPC. EIL. etc. for seeking suggestions for long term & short term measures to improve upon the conservation measures. The following steps have been taken during 1992-93 :—

(i) Close monitoring of consumption.

(ii) Use of low energy consuming lamps/ tubes.

(iii) Reinsulation of steam. condensate pipelines.

(iv) Periodic descaling of boiler tubes.

(v) Minimising the running hours of heavy machinery.

(vi) Reduction of Brine and Ammonia losses in the system.

Certain Schemes for energy conservation could not be implemented due to financial constraints.

The estimated savings achieved during the last three years and targeted during 1993-94. as a result of various energy conservation measures. are as follows :

(Rs. in lakhs)

	1990-91	1991-92	1992-93	1993-94 (Target)
Savings	40	45	66	85

II. Hindustan Antibiotics Limited

Hindustan Antibiotics Ltd. (HAL) was incorporated on 30th March. 1954. It manufactures antibiotics like Penicillin. Streptomycin. Ampicillin. Gentamycin. etc. HAL was chosen for entering into Memorandum of Understanding with the Government during the year 1992-93. The target of production and sales as provided for in the MOU is Rs. 150.0 crores for 1992-93. The company has three subsidiary units in the Joint Sector promoted in collaboration with State Industrial Development Corporations of Karnataka. Maharashtra and Manipur.

Production and Sales Performance

Production. Sales and Profit/Loss for the period April-September. 1993 as compared to April-September. 1992 are given below :—

(Rs. in lakhs)

Sl. No.	Particulars	Performance for the period		
		Target 93-94	April-Sept.. 93	April-Sept.. 92
1.	Value of production	18700	10633	8427
2.	Sales	18700	8913	7272
3.	Cash Profit	1594	681	553
4.	Net Profit	644	142	99

The value of production for the period April-September. 1993 is Rs. 10633 lakhs as against the target of Rs. 8789 lakhs. showing a target achievement of 121% and a growth of 26% over the corresponding period of previous year.

There has been an increase in production of Penicillin Ist Crystals (+20%). Carbendazim (+>100%). Aureofungin (+>100%). Human Syrups (+66%). Vet. vials (+37%) and Vet. tablets (+>100%) as compared to the corresponding period of 1992-93.

The net sales for the period April-September, 93 is Rs. 8913 lakhs as against the target of Rs. 7667 lakhs. showing a target achievement of 116% and a growth of 23% over the corresponding period of previous year. There has been overall improvement in all the sectors except Exports. viz.. Bulk drugs (+39%). Trade (+6%). Institutions (+20%). Agriculture (+62%). Veterinary (+30%) as compared to the corresponding period of previous year.

The Company has achieved a cash profit of Rs. 681 lakhs and the net profit of Rs. 142 lakhs against the target of Rs. 552 lakhs and Rs. 78 lakhs respectively.

Introduction/Development of New Products

(a) New products introduced

(1) Nifedipine—5mg. 10mg. 15mg. Sustained release tablets.

(2) Isovac

(b) New Products developed

(1) Nifedipine + Atenolol SR tablet.

(2) Diltiazem Hydrochloride SR tablet

(3) Omeprazole Capsules

Joint Sector's Performance

Production and Sales performance of each of the Joint Sector Companies for the period April-September. 93 is given below :—

Value in Rs. Lakhs

Sr. No.	Joint Sector	Particulars	April 1993-94	Sept. 1992-93
1.	Karnataka Antibiotics & Pharmaceuticals Limited Bangalore	Value of Prodn.	1694.6	1159
		Sales	1565.8	1207
2.	Maharashtra Antibiotics & Pharmaceuticals Limited Nagpur	Value of Prodn.	573.6	414
		Sales	494.4	464
3.	Manipur State Drugs & Pharmaceuticals Limited Imphal	Capsulation Section was commissioned and building construction work and equipment procurement work is in progress.		

Energy Conservation Measures

Energy conservation measures taken up in HAL are as given below :—

The total energy demand in HAL is met by Fossil Fuel LSHS and Furnace Oil for generating steam and electricity for running compressors. chillers. fermentors and allied equipments. The following energy conservation measures were implemented to reduce the specific consumption of fuel oil and electricity.

1. Compressed air system upgradation at Penicillin Plant.
2. Steam distribution network upgradation and rationalisation.
3. Use of Emulsified fuel oil for boilers resulting in achieving higher steam to fuel ratio.
4. Monitoring/analysis of generation of utilities and energy consumption of each product by way of monthly energy audit.
5. Replacement of Filter Press by Membrane filtration system in Procaine Penicillin area resulting in saving of steam.
6. Use of improved packing in distillation column resulting in reduction of r flux ratio and thus saving on steam consumption.
7. Enforcing good house keeping including attending steam leakage. maintenance of faulty steam traps etc.

Energy Conservation measures under progress

1. Phasewise installation of actuator operated ON-OFF control values on coolant lines of condensors/heat exchangers on Process/ service units.
2. Scheme for rationalisation of cooling tower water distribution.
3. Scheme for conservation of chilled water in Streptomycin fermentation.

III. Bengal Chemicals & Pharmaceuticals Limited

Bengal Chemicals & Pharmaceuticals Ltd. (BCPL) was incorporated on 27-3-1981 to take over the Nationalised Undertaking, Bengal Chemicals & Pharmaceutical Works Ltd. (BCPW), founded by Acharya P.C. Ray in the last decade of 19th Century.

The Company has four Manufacturing Units located at Maniktala & Panihati in Calcutta, Bombay and Kanpur. The Company has been manufacturing and marketing wide range of Industrial Chemicals (Sulphuric Acid and Ferric Alum). Drugs & Pharmaceuticals and Cosmetics & Home-Products. Sales Operations are carried out from 13 centres spread throughout the country.

Operational Performance :

As against targetted turnover of Rs. 24.68 crores for the year 1992-93, actual production was Rs. 13.57 crores. In case of sales, actual performance was Rs. 13.23 crores against the target of Rs. 24.36 crores. There had been de-growth to the extent of 17.5% in Production and 18% in Sales as compared to level of performance achieved during 1991-92. The short-fall was primarily due to shortage of Working Capital; and major suppliers declining to supply on credit, resulting in shortage of packaging and raw materials.

Cash loss including Interest on Working Capital for the year 1992-93 went upto Rs. 5.98 crores, as compared to Rs. 5.32 crores during the previous year. The increase in Cash Loss mainly was due to lesser utilisation of production capacity for constraints of Working Capital. During 1992-93, 36 employees retired/resigned and 63 employees retired under V.R.S.

Performance during 1993-94 :

During April to September. 1993, the Company achieved production worth Rs. 8.56 crores and Sales Turnover of Rs. 7.30 crores against the respective targets of Rs. 12.52 crores and Rs. 12.44 crores. During the current year, 55 employees were separated through VRS.

Scheme on Modernisation, Debottlenecking & Expansions :

During the year 1992-93, modifications in Tablets and Capsules Section including Analytical Laboratories were carried out and the Company obtained GMP certificate from the Director, Drugs Control, Government of West Bengal. The Project for expansion of capacity of Ointment (Eutheria and Benprofen) from 30 TPA to 60 TPA was completed by March, 1993. Orders were placed for supply of Automatic Bottling/Sealing & Labelling Machine for

expansion of bottling capacity of Pheneol at Panihati Factory and also in Bombay Factory.

Rehabilitation Plan :

Consequent on the reference of the Company to BIFR in terms of the amendment to Sick Industrial Companies Act. 1985 BIFR held its first hearing on 14-1-93 and directed the Company to submit the Rehabilitation Scheme to IRBI which will act as the Operating Agency.

The Company furnished its Plan to IRBI. In their draft scheme submitted to BIFR. IRBI observed that the proposal in its present form was not viable and directed the Company to prepare a fresh Scheme with Diversification Project(s) into value added product-mix.

A Revival Plan for the company is under consideration.

Research & Development :

During the year 1992-93. the Company had developed Polyvalent Snake Venom Antiserum (Lyophilised) which is effective against venoms of Cobra, Russell's Viper, Saw-Scaled Viper and Common Krait. Prior to this development, the Company used to manufacture Snake Venom antiserum Bivalent which is effective only against Venoms of Cobra and Russell's Viper.

During the year. the Company developed the following formulations :

(a) Atenolol Tablet, which is used as an antianginal Drug.

(b) Ampicillin and Cloxacillin Capsules. which is effective against infections due to Beta-Lactamase producing Gram negative Organism.

IV. Bengal Immunity Ltd.

The Company was started in 1919. The company has been the pioneer in the production of life-saving drugs, especially. sera. vaccines and toxoids with its own know-how and indigenous materials. The company has two manufacturing units of which one is located at Calcutta and the other at Dehra Dun, U.P. It also has a Research Institute at Calcutta.

The management of the company was taken over by the Government of India under Industries (Development and Regulation) Act. 1951 in May. 1978 and it was nationalised on the 1st October. 1984.

The authorised and paid up capital of the company as on 31st march. 1993 was Rs. 18.00 crores and Rs. 16.24 crores respectively.

Operating Results :

The value of production and sales during the year 1992-93 was Rs. 15.72 crores and Rs. 14.91 crores respectively as against Rs. 16.20 crores and Rs. 14.89 crores respectively in the year 1991-92. The net loss during the year 1992-93 was Rs. 7.26 crores. The estimated value of production and sales for the year 1993-94 is Rs. 20.0 crores and Rs. 18.0 crores respectively.

Schemes Under Implementation :

The plant and machinery installed are in many cases very old and outdated. The company has undertaken a phased programme to modernise its plants and equipment in some of its production areas. particularly. in Large Volume Parenterals (LVP). Sera and Toxoids. The Company has completed servicing of its unused 80 TPA Chloroquine Phosphate Plant which has commenced trial runs and is expected to go in for commercial production soon.

General :

The company was declared "sick" under Section 3(O) of Sick Industrial Companies (Special Provision) Act, 1985. The Company submitted a Revival Plan jointly prepared by both the two Unions and Officers' Association to BIFR and subsequently. a revised Revival Plan was submitted to the Ministry and to BIFR on 19th July. 1993. the day when the case was heard for the second time by the BIFR. However. as per the directives of BIFR. a techno-economic analysis has been undertaken and the revival plan is under further examination of the Operating Agency i.e. the IRBI. Calcutta.

V. Smith Stanistreet & Pharmaceuticals Ltd.

The Company was set up in 1821 as a British Trading Company in India. Subsequently the Company started manufacturing operations in India. It was Indianised in 1958 when it also used to manufacture on contract, the products of Multinational Companies. The Company became sick around 1965. Its management was taken over by the Government of India in 1972 and finally nationalised in October. 1977. Smith Stanistreet Pharmaceuticals Ltd. (SSPL) was incorporated in July. 1978.

SSPL presently manufactures Tablets. Capsules. Parenterals. Oral Liquids. Ointments. etc. in its manufacturing Unit at Calcutta. In addition the Company manufactures Aminovin Tonic at Bangalore. It has 10 sales outlets spread over the country through which Company's products are distributed and marketed.

Operating Results : The value of production and sales during the year 1992-93 was Rs. 1018 lakhs and Rs. 816 lakhs respectively as against Rs. 621 lakhs and Rs. 658 lakhs respectively in the year 1991-92. The net loss during the year 1992-93 was Rs. 664.0 lakhs. The company is passing through acute working capital crisis due to which production during April-September. 1993 period was only Rs. 263 lakhs and the corresponding gross sales being Rs. 435 lakhs compared to Rs. 371 lakhs and Rs. 408 lakhs respectively in the corresponding period previous year.

The production facilities of the Company have been upgraded. Consequently good manufacturing practices Certificate for Oral Liquid & Capsules has been obtained. The Company has augmented its production capacity through the addition of AYURVEDIC items manufacturing section. Two Ayurvedic products are on the ambit for launch. A number of new products like Cloxastan-A. Amoxycillin and Cephalexin Capsules have been launched in the current year. In addition. a number of new products are in the pipeline for launch.

The total man-power of the Company stood at 790 as on 31-03-1993. Voluntary Retirement Scheme is being continued. The projected strength on 31-03-1994 is likely to be 745.

The case of the Company has been referred to the Board for Industrial & Financial Reconstruction (BIFR). The Rehabilitation Plan has been drawn up jointly and furnished to all concerned. Industrial Reconstruction Bank of India (IRBI) has been appointed as the Operating Agency by BIFR. They have carried out a Techno-Economic viability Study. The Company is all set to revive through optimum utilisation of its production and human resource capacities: reinforcing the marketing operations through more value-added products. increased productivity and by going global. The company is also assessing the possibilities of diversifying into newer operations.

B. Petrochemicals Undertakings

There are three organisations in Petrochemicals Sector under the administrative central of the Deptt. of Chemicals & Petrochemicals.

I. Indian Petrochemicals Corporation Ltd.

Indian Petrochemicals Corporation Limited (IPCL) is a public undertaking incorporated in March. 1969 with an authorised capital of Rs. 200 crores and a paid up capital of Rs. 186 crores. Subsequent to the partial disinvestment of IPCL shares by the Government. IPCL's equity capital structure is now composed of 72% holding by the Government of India. 18% by the public financial institutions and 10% by the public. The paid up capital of the company as on 31-3-93 stood at Rs. 195.46 crores. The authorised capital of the company has also since been raised from Rs. 200 to Rs. 400 crores.

Initially the production facilities of IPCL were set up near Baroda in Gujarat and the company was entrusted with the responsibility of manufacture and distribution of various petrochemicals like polymers. synthetic organic chemicals. plastics. fibres and fibre intermediates from petroleum feedstock to meet the demand of these products as per the plan targets. Besides production of the above petrochemical items. the Company concentrated its attention on developing markets for these products during the period 1973 to 1981. In order to keep pace with the demand created, the need to expand production capacities was felt. A new gas cracker complex based on associated gas from Bombay High was conceived by the Government as a part of the 6th Five Year Plan and the new complex set up at Nagothane in Raigad district of Maharashtra has since started commercial production during 1992-93.

The Company has a strong R & D Centre. It has attained dominance in petrochemical research in the fields of catalysts and surface science. chemical physics. material science. organic chemistry. chemical engineering. analytical spectroscopy and biology. In addition to the annual targets being met for various projects. a distinctive achievement during 1992-93 in the field of research and development was the development of a Zeolite based adsorbent for PSA processes for the first time in the country. The adsorbent has been successfully evaluated and commercial trials are to commence in the near future. The bimetallic reforming catalysts (IPR 2001) at Madras Refinery Limited. was successfully rejuvenated.

IPCL has taken in hand the implementation of another 300.000 TPA Ethylene capacity gas cracker complex at Gandhar in district Bharuch in Gujarat. Technologies have been tied up for several plants and detailed engineering is in progress. IPCL's equal equity joint venture project with GE Plastics BV. Netherlands for engineering plastics alloys/blends/ compounds at Baroda is nearing completion and is

expected to commence production during the year 1993-94.

IPCL is a profit making company right from its inception. During 1992-93. the gross turn over of the company was Rs. 2247 crores and the gross profit was Rs. 562.17 crores.

IPCL has set up the Petrochemicals Management Development Institute for providing specialised training to its employees. Personnel of National Petroleum Company (NCP) of Iran are also being trained at PMDI under a contract signed by IPCL with that Company.

II. Petrofils Co-operative Limited

Petrofils Co-operative Limited (PCL) is a joint venture of the Government of India and Weavers' Co-operatives spread throughout the country. The Government had established this Co-operative Society with the principal objective of providing polyester filament yarn to weavers in the cooperative sector. The Society is continuing its efforts for the development of polyster weaving in the decentralised weaving sectors covering both powerlooms and handlooms so as to afford weavers an opportunity to earn better wages and higher profits thereby improving their economic conditions.

As on 31st March. 1993. the Society had 1403 members accounting for 12.36% of equity. The Society produces polyester filament yarn and nylon filament yarn at its three plants located at Vadodara and Naldhari in Gujarat. The Society produced 14296 MTs of yarn in 1991-92 and 16.548 MTs of yarn in 1992-93. The turnover of Society was Rs. 278.65 crores in 1991-92 and Rs. 295.24 crores in 1992-93. The Society underwent a net loss of Rs. 15.83 crores in 1992-93 as against Rs. 6.88 crores in 1991-92, on account of high incidence of excise duty on PFY/ NFY. substantial increase in the input cost. depressed market conditions. tough competition from the private sector manufacturing synthetic yarn. high interest burden on account of execution of 3 major projects etc. However. there has not been any cash loss. During the year the Society successfully commissioned the spinning section of the newly set up polyester filament yarn plant at Naldhari in two phases i.e. in January and August. 1992. The Society is setting up a 300 MTA Spandex Yarn Project at Naldhari. which is likely to be commissioned by April 1994. The society has planned to set up a project for the manufacture of Spun Bonded Fabrics (Gee-Textiles) at its Naldari site with a capacity of 5000 MT per annum.

III. Central Institute of Plastic Engineering and Technology

Central Institute of Plastic Engineering and Technology (CIPET) was established in 1968 at Madras with the primary objective to develop manpower and provide technical services to plastics and its allied industries. Main objectives of the Institute are manpower development. application development. testing and quality control. consultancy and advisory services and documentation. Presently. there are eight extension centres of CIPET at Ahmedabad. Lucknow. Hyderabad. Bhopal. Bhubaneshwar. Imphal. Amritsar and Mysore. The thrust area of these centres are processing and machinery development. teletronics and automobiles. Engineering Plastics. Plastics in Agriculture. Packaing and Housing. Water Management and household appliances. plastics as substitute for conventional material and plastics in precision engineering. The thrust area for the headquarter centre at Madras is evaluation and quality control.

The Institute imparted training to 1038 students in several long term courses in 1992-93 as against training of 755 students in 1991-92. In addition, 80 short-term courses were conducted in 1992-93 involving 917 students as against 58 courses involving 805 students in 1991-92.

C. Chemicals and Pesticides Undertakings :

I. Hindustan Organic Chemicals Limited

Hindustan Organic Chemicals Ltd., (HOC) was incorporated on 12th December. 1960 for setting up manufacturing capacities for chemicals/intermediates which are required for production of Dyes. Dye-Intermediates. Rubber Chemicals. Pesticides. Drugs and Pharmaceuticals. Laminates. etc. It was expected that indigenous manufacture of these chemical intermediates will give impetus to downstream industry in a big way. resulting in setting up of chemical units and achieving self-sufficiency for the country in this area. This objective of setting up HOC has been fully achieved since at present more than 500 units based on HOC's products have been set up all over the country which have not only achieved self sufficiency but have entered into international market earning precious foriegn exchange by exporting chemicals. dyes & drugs over a number of years.

The product range of HOC include Phenol. Acetone. Aniline. Nitrobenzene. Nitrotoluenes. Chlorobenzenes and Nitrochlorobenzenes. The raw materials used by HOC are Benzene.Toluene. LPG.

Methanol. Naphtha and Sulphur. majority of which come from Petroleum Refineries.

HOC has two units. one at Rasayni (Maharashtra) and the other at Cochin (Kerala). It has also formed a subsidiary company at Rudraram (AP) for manufacture of Poly-tetra-fluoro-ethylene (PTFE), a high tech engineering plastic.

The total number of employees is 2337 in HOC and 300 in the subsidiary company. Industrial relations in all the three units have always been cordial. Suitable welfare measures and incentives for achieving productivity and safety have been introduced.

HOC has achieved more than 90% capacity utilisation and made substantial profits and declared dividend for the last 19 years continuously. With the equity capital of Rs. 49.35 crores it has built reserves of Rs. 167.26 crores as on 31-3-1993. It has not only absorbed but also improved technolgies purchased from abroad and set up additional capacities based on in-house development of technology. The achievements in the areas of Research & Development. Pollution Control. recovery of wealth from waste. export performance. presentation of Annual Reports. safety and energy conservation have earned awards and accolades from prestigious institutions and Government Agencies.

HOC has always encouraged workers' participation in the Management through Joint Councils and Shop Councils which has resulted in full cooperation of employees in achieving maximum efficiency and growth for the organisation.

The company's performance for the four years period ending 1992-93 and the performance anticipated during 1993-94 are as follows:

(Rs. in crores)

Year		Installed capacity (TPA)	Production (MT)	Sales Turnover	Operating Profit	Net Profit before tax
1989-90		231196	213506	205.05	59.22	35.83
1990-91		231196	212945	229.55	66.32	45.33
1991-92		253696	220635	290.84	77.78	56.65
1992-93		253696	228084	295.37	69.17	40.57
1993-94	(Anticipated)	253696	238625	320.00	49.00	15.00

Owing to large scale imports because of liberalisation coupled with severe competition in the domestic market. the profit margin is expected to go down considerably. However. concerted efforts are being made to maintain the profitability at the existing level through various measures such as cost reduction programmes and procurement of raw materials from cheaper sources etc.

The company has ambitious expansion/diversification plans for implementation during the eighth plan period (1992—97) which include. apart from the expansion of certain existing capacities. (i) Caustic Soda/Chlorine (ii) MDI/TDI (iii) Hydrogen Peroxide (iv) Polyurethane Systems etc. at an investment of about Rs. 550 crores.

II. Hindustan Insecticides Limited

Hindustan Insecticides Limited incorporated in 1954 has at present three Units one each at Delhi. Udyogamandal in Kerala and Rasayani in Maharashtra. The Company also has a subsidiary company. namely. the Southern Pesticides Corporation with headquarters at Hyderabad and factory at Kovvur in Andhra Pradesh. HIL is engaged in the manufacture of DDT. BHC. Malathion. Endosulfan and Butachlor. five major pesticides used in the country. During 1992-93. HIL commissioned their Monocrotophos Tech. plant with an annual capacity of 300 MT at their Rasayani Unit in Maharashtra. HIL is also establishing manufacturing facilities for Phosphomidon and Carboxin at Rasayani Plant. Proposals are also on hand for setting up plants for the production of Dicofol and Mancozeb during 8th Five Year Plan. HIL supplies the major portion of its formulations to the National Malaria Eradication Programme.

HIL has its Central R & D Complex at Dundahera in Gurgaon District, Haryana State. The Central R & D complex has scientific and technical personnel working in various departments such as synthesis process development. formulations. entomology. residue studies. analytical techniques

and pilot plant. At present, R & D is developing process technologies for products such as Oxycarboxin copper oxychloride. Mancozeb and Pendimethalin. Other services rendered by R & D include pilot plant trial and attending the trouble shooting in production units.

The performance of the Company is as under :—

(Rs. in lakhs)

	Production (MT/KL)	Sales Turnover	Operating Profit	Net Profit before taxation
1989-90	25.484	4936	365.66	(—) 160.79
90-91	26.026	6436	(—) 318.06	(—) 938.70
91-92	26.042	7186	(+) 65.44	(—) 626.22
92-93	26.401	8254	(+) 765.92	(+) 44.14
93-94 (Projected)	28.435	10052	(+) 725.06	(—) 80.38

The Company achieved an all time high export turnover of Rs. 424 lakhs during 1992-93 with exports to various countries like Austria, Argentina. Germany. Belgium and Mexico and is aiming to achieve an export target of Rs. 608 lakhs during 1993-94.

4—794 M/o C & F/93

GENERAL

Organisational set up of the Department

The main activities of the Department in relation to the industries allocated to it (Annexure-I) are overall sectoral planning and the development and control of these Industries under the Industries (Development and Regulations) Act as well as monitoring of production and distribution. The administrative and managerial control of the public sector undertakings engaged in the manufacture of various chemicals, pharmaceuticals and petrochemical items is also a major function of the Department.

Secretary (Chemicals and Petrochemicals) is in overall charge of the Department of Chemicals and Petrochemicals. The work of the Department is distributed among three Joint Secretaries who look after four divisions i.e. Administration, Chemicals, Petrochemicals and Drugs and Pharmaceuticals. In addition, there is a separate cell looking after the work relating to Bhopal Gas Leak Disaster and special laws relating thereto. A Financial Adviser of the rank of Joint Secretary advises the Secretary on financial matters. A post of Joint Secretary has also been created recently to conduct hearings in Drugs Prices Equalisation Account cases.

Senior officers designated as Advisers render advice on technical matters relating to the industries in the Drugs, Chemicals and Petrochemicals sectors.

Besides the Department incorporates the functions of the Development Commissioner (Pharmaceutical Industries) which is responsible for the implementation of Drugs (Prices Control) Order and tariff matters relating to the pharmaceutical industry.

The Department also has eight public sector undertakings besides subsidiaries under its administrative control and two other organisations. These are listed at Annexure-V.

Employment of Scheduled Castes/Scheduled Tribes/ Physically Handicapped and Blind

The representation of Scheduled Castes/Scheduled Tribes, Physically handicapped and Blind in the main Secretariat of the Department of Chemicals and Petrochemicals as on 30-11-93 is as under :—

Group	Total No. of posts (30-11-93)	Scheduled Castes	Scheduled Tribes	Physically handicapped	Blind
'A'	34	5	—	—	—
'B'	54	4	1	—	—
'C'	71	11	3	1	—
'D'	43	22	2	—	—
Total	202	42	6	1	—

The posts of Group 'A' include officers on deputation from IAS, Central Services, Central Secretariat Services and other Departments/Undertakings. Recruitment to posts in Group 'B' and 'C' is mostly done on the basis of nominations made by the Department of Personnel and Training.

Representation of Scheduled Castes/Scheduled Tribes in the Public Sector Undertakings

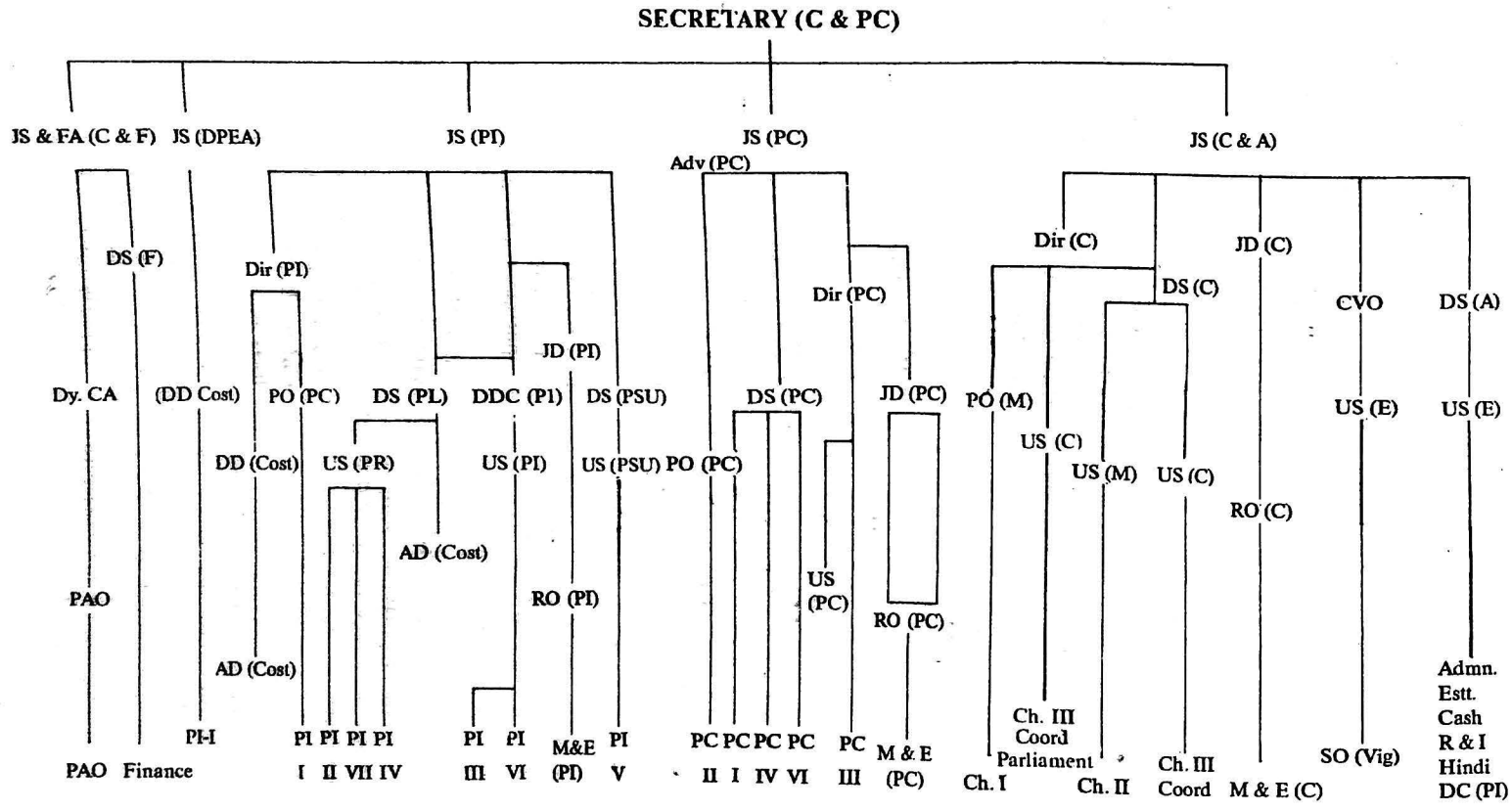
Consequent to the issue of the instructions by the Bureau of Public Enterprises for the reservation of vacancies for the members of Scheduled Castes and Scheduled Tribes Communities, reports are being called from the Public Sector Undertakings about employment of persons of Scheduled Castes/ Scheduled Tribes Community so as to keep watch on filling up the posts reserved for these communities in these undertakings.

Employment of Physically Handicapped

Half yearly reports in respect of employment of physically handicapped persons are received from the Public Sector Undertakings.

ORGANISATION CHART OF THE DEPARTMENT OF CHEMICALS AND PETROCHEMICALS (AS ON 31-1-94)

MINISTER OF STATE (C & F)



C — Chemicals
PC — Petrochemicals
PI — Pharmaceutical Industry
B — Bhopal Gas

Organisation and Methods

An Internal Work Study and Organisation and Methods unit is functioning in the Deptt. The unit is also looking after training—both inland and foreign—of officials of the Department and also Public Sector Undertakings under its administrative control. A number of officers and staff members were sponsored for various training programmes in India and abroad. The inland and foreign training programmes covered are as under :—

1. Empanelled Section Officers (Refresher) training
2. Training on Reservation for SC and ST
3. Management in Govt. Programme
4. Industrial and Trade Liberalisation Training Programme
5. Briefing course on Departmental Security
6. Training on conduct Rules/Estt. Rules.
7. Assistants (Refresher) Training
8. Pension Training
9. Training on Project Appraisal Implementation of Monitoring of Rural Development
10. Training in Financial Rules
11. IVPAC/UNESCO/UNIDO Fellowship in the area of safety in chemical production.

Public Grievances

The machinery for redressal of Public Grievances continued to function in the Department with an officer of the rank of Joint Secretary designated as Director of Public Grievances.

Use of Hindi as Official Language

Efforts were continued to promote the use of Hindi in Official work in the Department during the period under report. There is a Hindi Section in the Department to implement the various provisions of the Official Language Act and Rules and instructions issued by the Government for the progressive use of Hindi. All notifications. Resolutions. Orders. Papers laid on the tables of both Houses of Parliament. general orders etc. were issued bilingually in Hindi and English. Letters received in Hindi were replied to in Hindi. Efforts were made to promote original noting and drafting in Hindi in the official work. Hindi week was organised in the Department from 14-9-93 to 20-9-93.

Official Language Implementation Committee

The Official Language Implementation Committee set up under the Chairmanship of Joint Secretary (Admn.) held meetings regularly and reviewed the progress made in the use of Hindi in the Department and suggested measures to step up the progress of implementation of Official Language.

Hindi Teaching Scheme

80% staff of the Department of Chemicals and Petro-Chemicals have already acquired a Working knowledge of Hindi. Non-Hindi knowing officers and employees were nominated for training in Hindi. Similarly; typists and stenographers were nominated for training in Hindi typing and stenography, respectively.

Inspection by the Committee of Parliament on Official Language

The first Sub-Committee of the Committee of Parliament on Official Language visited Karnataka Antibiotics and Pharmaceuticals Ltd. Bangalore, Indian Drugs & Pharmaceuticals Ltd., Madras and Smith Stanistreet Pharmaceuticals Ltd., Calcutta, dur ing the period under review The committee also reviewed the working of the Department in January, 1994.

The measures suggested by the committee for the implementation of the various provisions of the Official Language Act are being complied with by the Department and the respective undertakings/offices.

Use of Hindi in the public sector undertakings under the administrative control of the Department

The Public Sector Undertakings under the administrative control of the Department continued to make efforts to accelerate the use of Hindi in their official work. Almost all the public sector undertakings have set up official language implementation committees which are functioning successfully. Hindi week was organised by the undertakings during the period under review. Almost all the undertakings have appointed necessary Hindi staff for the implementation of the official language policy of the Government. Quarterly progress reports relating to the progressive use of Hindi were called for from the undertakings and reviewed in the Department. The shortcomings. wherever observed, were brought to the notice of the concerned undertaking for suitable corrective action.

List of Items allocated to Department of Chemical and Petrochemicals (Rasayan Aur Petro-Rasayan Vibhag)

1. Drugs and Pharmaceuticals.

2. Insecticides (excluding the administration of the Insecticides) Act, 1968 (46 of 1968).

3. Molasses—distribution and pricing.

4. Alcohol—industrial and potable (excluding Alcoholic drinks from non-molasses base) including the Indian Power Alcohol Act, 1948 (22 of 1948).

5. Dye-stuffs and dye-intermediates.

6. All organic and inorganic chemicals, not specifically allotted to any other Ministry or Department.

7. Planning, development and control of and assistance to all industries dealt with by the Department.

8. All attached or subordinate offices or other organisations concerned with any of the subjects specified under this Department.

9. Public Sector projects concerned with the subjects included under this Department except such projects as are specifically allotted to any other Ministry or Department.

10. Bhopal Gas Leak Disaster—Special Laws relating thereto.

11. Petrochemicals.

12. Industries relating to production of non-cellulosic synthetic fibres (Nylon Polyster, Acrylic etc.)

13. Synthetic rubber.

14. Plastics including fabrications of plastic and moulded goods.

15. All Public Sector units relating to the above matters.

16. All attached and subordinate offices or other organisations concerned with any of the subjects specified in this list.

ANNEXURE II

DRUGS AND PHARMACEUTICALS (MONITORED BULK DRUGS) ESTIMATED DEMAND AND PRODUCTION ACHIEVEMENT (ORGANISED SECTOR)

Name of the Drug	A/c Unit	1991-92 Actual Prodn.	1992-93 Estimated Demand	1992-93 Actual Prodn.	1993-94 Estimated Demand
1	2	3	4	5	6
I. ANTIBIOTICS					
1. Penicillin					
(a) Penicillin G. Sodium	MMU	110.23	330.00	128.51	330.00
(b) Penicillin G. Procaine	MMU	145.56		210.93	
(c) Penicillin G. (Ist Cry)	..	1017.28	2046.00	1199.34	2353.00
(d) Penicillin G. Benzathine	..	25.34		21.45	
2. Streptomycil	T	167.98	180.00	153.33	180.00
3. Chloramphenicol Powder@	T	89.94	200.00	108.93	200.00
4. Chloramphenicol Palmitate@	T	17.08		17.43	
5. Tetracycline	T	174.26	280.00	134.00	294.00
6. Oxytetracycline	T	177.33	182.00	193.15	191.00
7. Ampicillin@	T	299.77	525.00	253.78	603.00
8. Erythromycin@	T	84.58	88.00	125.18	96.00
9. Amoxicillin@	T	84.29	175.00	78.08	201.00
10. Doxycycline	T	1.26	12.00	1.54	13.00
11. Gentamycin	Kg	675.00	7320.00	88.00	8053.00
12. Framycetin	T	8.12	4.00	8.19	5.00
13. Rifampicine@	T	40.45	236.00	58.28	272.00
14. Ampicilin Sodium@	T	24.48	105.00	NA	121.00
15. Cloxacillin	T	93.02	59.00	75.87	64.00
16. Cephalexin	T	103.00	105.00	91.48	121.00
17. Griseofulvin	T	8.65	59.00	12.19	64.00
II. SULPHA DRUGS					
1. Sulphamethoxazole@	T	2042.89	732.00	1592.55	805.00
2. Sulphadimidine	T	110.18	250.00	41.92	250.00
3. Sulphacetamide	T	55.28	61.00	38.56	64.00
4. Sulphadiazine	T	—	91.00	—	96.00
5. Sulphamoxile	T	49.49	73.00	52.03	77.00
6. Sulphaphenazole	T	—	50.00	—	50.00
7. Sulphaguanidine	T	84.45	180.00	48.25	180.00
8. Sulphasomidine	T	2.24	60.00	0.13	60.00
III. VITAMINS					
1. Vitamin A	MMU	71.19	115.00	96.73	121.00
2. Vitamin B1	T	78.80	125.00	57.32	133.00
3. Vitamin B2	T	19.84	52.00	20.46	56.00
4. Vitamin B12	Kg	354.88	288.00	407.00	309.00
5. Vitamin C	T	863.01	1033.00	871.74	1085.00

Name of the Drug	A/c Unit	1991-92 Actual Prodn.	1992-93		1993-94
			Estimated Demand	Actual Prodn.	Estimated Demand
1	2	3	4	5	6
6. Vitamin D3	Kg	322.00	517.00	343.00	542.00
7. Vitamin E	T	174.20	22.00	123.60	22.00
8. Folic Acid	T	3.21	10.00	10.98	10.00
9. Nicotinic Acid@	T	0.60	292.00	—	306.00
10. Nicotinamide@	T	100.40		102.55	
11. Vitamin B6	T	57.47	67.00	72.76	70.00
IV. ANALGESICS & ANTIPYRETICS ETC.					
1. Analgin@	T	261.30	1823.00	13.80	1914.00
2. Aspirin	T	1320.67	1945.00	1465.86	2042.00
3. Oxyphenbutazone	T	8.26	60.00	9.46	60.00
4. Phenyl Butazone	T	29.14	90.00	12.25	90.00
5. Paracetamole@	T	6.18	2928.00	—	3221.00
6. Pethidine	Kg	161.00	729.00	36.00	766.00
7. Ibuprofen@	T	731.37	210.00	655.89	241.00
8. Piroxicam	T	1.37	1.46	4.07	1.61
V. CORTICOSTEROIDS					
1. Dexamethazone@	Kg	377.00	729.00	488.00	766.00
2. Betamethasone@	Kg	1190.00	1459.00	1380.00	1532.00
3. Prednisolone	Kg	1949.00	5470.00	2069.00	5743.00
4. Hydrocortisone	Kg	2.00	1155.00	4.00	1212.00
VI. ANTI T.B. DRUGS					
1. PAS & its Salts	T	25.19	60.00	5.77	60.00
2. INH@	T	25.45	366.00	—	403.00
3. Thiacetazone	T	1.25	85.00	20.58	89.00
4. Ethambutol	T	532.79	439.00	453.00	483.00
5. Pyrazinamide@	T	63.29	81.00	10.44	89.00
VII. ANTI MALARIALS					
1. Chloroquin	T	196.22	200.00	194.56	200.00
2. Amodiaquin	T	30.82	20.00	12.80	20.00
VIII. ANTI DYSENTRY DRUGS					
1. Metronidasole	T	482.67	586.00	559.10	644.00
2. Tinidazole@	T	50.45	59.00	83.55	64.00
3. Diloxamide Furoate@	T	—	102.00	—	113.00
4. Iodochlorohydroxyquinoline	T	215.64	NA	224.41	NA
5. Furazolidone@	T	—	329.00	—	362.00
ANTI DIABETICS					
1. Chlorpropamide	T	83.98	49.00	151.48	51.00

Name of the Drug	A/c Unit	1991-92 Actual Prodn.	1992-93 Estimated Demand	1992-93 Actual Prodn.	1993-94 Estimated Demand
1	2	3	4	5	6
2. Tolbutamide	T	34.67	25.00	27.40	25.00
3. Glybenclamide	T	4.03	2.00	4.44	2.00
4. Insulin.	MU	3097.00	5124.00	2966.00	5637.00
X. CNS STIMULANTS					
1. Caffeine@	T	48.91	164.00	67.57	172.00
2. Nikethamide@	T	0.06	3.00	0.01	3.00
XI. DIURETICS					
1. Frusemide	T	7.59	10.00	8.57	10.00
2. Acetazolamide	T	4.06	3.00	11.93	3.00
3. Hydrochlorothiazide	T	8.58	4.00	7.88	5.00
4. Spironelactone	T	0.26	1.82	0.63	1.91
XII. ANTI ASTHAMATICS					
1. Ephedrine	T	79.20	61.00	71.55	64.00
2. Salbutamol	Kg	11557.00	3647.00	11302.00	3829.00
3. Terbutaline	Kg	465.00	547.00	878.00	574.00
4. Theophylline	T	178.92	304.00	195.68	319.00
5. Aminophylline	T	6.96		4.60	
XIII. CARDIOVASCULAR DRUGS					
1. Propranolol@	T	6.91	15.00	6.19	15.00
2. Xanthinol Nicotinate	T	13.33	18.00	15.01	19.00
3. Digoxin	Kg	17.85	43.00	31.47	45.00
4. Methyl Dopa	T	31.14	61.00	7.74	64.00
XIV. ANAESTHETICS					
1. Lignocaine/Xylocaine	T	6.18	29.00	7.72	32.00
2. Procaine	T	48.41	88.00	53.27	97.00
XV. ANTI HISTAMINS					
1. Pheneramine Maleate	T	38.00	30.00	38.20	32.00
2. Diphenhydramine@	T	1.53	22.00	—	23.00
XVI. ANTI HELMENTICS					
1. Piperazine & Salts@	T	—	5.0..0	—	50.00

Name of the Drug	A/c Unit	1991-92 Actual Prodn.	1992-93		1993-94
			Estimated Demand	Actual Prodn.	Estimated Demand
1	2	3	4	5	6
2. Mebandazole@	T	6.90	79.00	7.22	91.00
3. Tetramisole/Levamisole	T	17.47	29.00	3.46	32.00
4. Pyrantel Palmoate	T	48.73	19.00	41.70	20.00
XVII. TRANQUILIZERS & SEDATIVES					
1. Phenobarbitone	T	1.26	20.00	—	20.00
2. Diazepam	T	1.13	26.00	1.13	28.00
3. Trifluperazine	T	0.03	2.50	—	2.50
4. Imipramine	T	0.43	6.00	0.32	6.00
5. Nitrazepam	Kg	250.00	524.00	411.00	561.00
XVIII. ANTI FILARIALS					
1. Diethyl Carbamazine@ (DEC Citrate)	T	8.27	45.00	2.47	45.00
XIX. ANTI LEPROTICS					
1. Dapsone	T	13.30	61.00	12.56	64.00
2. Clofazamine	T	1.64	3.04	2.72	3.19
XX. OTHER ANTI BACTERIAL					
1. Trimethoprim@	T	377.49	146.00	439.54	161.00
2. Nalidixic Acit	T	27.86	51.00	34.66	56.00
XXI. GASTRO INTESTINAL					
1. Ranitidine	T	138.66	59.00	172.05	64.00

Note

: Nil

@ : Major production is in Small Scale Sector which is not included in this statement.

5—794 M/o C & F/93

STATEMENT SHOWING CAPACITY & PRODUCTION OF CHEMICALS DURING 1992-93, 1993-94 AND TARGETTED PRODUCTION DURING 1994-95

Chemicals/Item	Unit	Inst. Cap.	Production		
			1992-93	1993-94 (Estd.)	1994-95 (Target)
1	2	3	4	5	6
INORGANIC CHEMICALS					
1. Soda Ash	000 M.T.	1623.6	1351.4	1400.0	1420.0
2. Caustic Soda	..	1300.2	1085.6	1090.0	1130.0
3. Liquid Chlorine	..	687.3	520.6	525.0	530.0
4. Carbon Black	..	217.7	155.4	160.0	170.0
5. Calcium Carbide	..	150.0	94.5	98.0	100.0
6. Red Phosphorous	..	1.7	0.9	1.0	1.2
7. Titanium Dioxide	..	46.5	24.3	26.0	27.5
8. Aluminium Fluoride	..	30.1	17.0	18.0	20.0
9. Potassium Chlorate	..	13.3	5.9	6.2	6.5
ORGANIC CHEMICALS					
1. Citric Acid	000 M.T.	6.3	5.7	5.8	6.0
2. Phenol	..	66.6	52.6	54.0	55.0
3. Maleic Anhydride	..	18.2	5.9	10.0	12.0
4. Methanol	..	356.0	230.6	240.0	250.0
5. Pentaerithritol	..	11.4	7.6	8.0	9.0
6. Acetone	..	62.6	43.9	45.0	50.0
7. Acetic Acid	..	119.9	100.8	105.0	110.0
8. Acetic Anhydride	..	49.9	33.8	35.0	37.0
9. Nitrobenzene	..	37.0	26.3	27.0	28.5
10. Formaldehyde	..	211.8	143.0	145.0	150.0
11. Mek	..	7.0	3.9	4.0	4.5
PESTICIDES (TECH.) INSECTICIDES					
1. B.H.C.	000 M.T	28.6	23.8	22.0	20.0
2. D.D.T.	..	9.1	6.7	6.5	7.0
3. Malathion	..	7.6	2.3	2.4	2.5
4. Methyl Parathion	..	4.5	2.1	2.2	2.4
5. Dimethoate	..	2.2	2.2	2.4	2.5
6. D.D.V.P.	..	2.3	1.7	2.0	2.2
7. Quinalphos	..	1.8	2.2	2.5	3.0
8. Monocrotophos	..	8.5	6.2	6.5	7.0
9. Phosphamidon	..	2.4	2.2	2.4	2.5
10. Phorate	..	3.7	3.2	3.5	3.8
11. Endosulphan	..	7.3	6.8	6.8	7.0
12. Fenvalerate	..	1.1	1.0	1.2	1.4
13. Cypermethrin	..	1.0	1.0	1.1	1.2
14. Anilophos	..	1.0	0.4	0.5	0.6
15. Chlorpyriphos	..	0.8	0.06	0.1	0.2
16. Phosalone	..	1.0	0.6	0.7	1.0

Chemicals/Item	Unit	Inst. Cap.	Production		
			1992-93	1993-94 (Estd.)	1994-95 (Target)
1	2	3	4	5	6
FUNGICIDES					
17. Captan & Captafol	000 M.T.	0.6	0.7	0.7	0.8
18. Carbandazin (Bavistin)	..	1.0	0.7	0.7	0.8
19. Mancozeb	..	4.0	3.6	4.0	4.0
HERBICIDES					
20. 2, 4-D	..	1.8	0.5	0.8	1.0
21. Butachlor	..	4.5	1.5	1.6	1.6
WEEDICIDES					
22. Isoproturon	..	3.1	2.1	2.5	2.7
RODENTICIDES					
23. Zinc Phosphide	..	0.9	0.3	0.4	0.5
FUMIGANTS					
24. Aluminium Phosphide	..	1.3	1.0	1.1	1.2

STATEMENT SHOWING CAPACITY & PRODUCTION OF CHEMICALS DURING 1992-93, 1993-94 AND TARGETTED PRODUCTION DURING 1994-95

Chemicals/Item	Unit	Inst. Cap.	Production		
			1992-93	1993-94 (Estd.)	1994-95 (Target)
1	2	3	4	5	6
DYES & DYESTUFFS					
1. Azo Dyes	000 M.T.	3.7	2.1	2.2	2.1
2. Acid Direct dyes (Other than Azo)	..	1.4	0.4	0.5	0.6
3. Disperse Dyes	..	3.3	1.8	1.9	2.0
4. Fast Colour Bases	..	1.2	0.4	0.5	0.7
5. Ingrain dyes	..	0.3	0.08	0.09	0.1
6. Optical whitening agents	..	1.4	0.9	1.0	1.1
7. Organic pigment colours	..	8.4	5.9	6.0	6.2
8. Pigment emulsion.	..	4.7	4.1	4.2	4.5
9. Reactive dyes	..	5.1	4.3	4.5	4.7
10. Stablised azoics (Rapid fast/Rapidogin)	..	0.2	Nil	Nil	Neg
11. Sulphur dyes (Sulphur Black)	..	2.9	2.7	2.8	2.8
12. Vat Dyes	..	2.1	2.0	2.0	2.2
13. Solubilised vat dyes	..	0.3	0.1	0.1	0.2
14. Food colours	..	0.1	0.08	0.1	0.1
15. Napthols	..	1.5	0.9	1.0	1.0
16. Other dyes (including Acrylic Fibre)	..	2.3	0.0	0.0	0.0
Total Dyestuffs		38.9	25.66	26.89	28.60

ANNEXURE IV

IMPORTANT PETROCHEMICALS

(Targets & Achievements)

(Figures in '000 MT)

Product	1992-93		1993-94				1994-95	
	Actual		Target		Estimated		Target	
	C	P	C	P	C	P	C	P**
1	2	3	4	5	6	7	8	9
FIBRES								
1. AF	90.00	56.35	90.00*	75.00	93.00	65.00	97.00	85.00
2. NFY	*	32.47	*	30.00	*	35.00	*	40.00
3. NIY/TC	*	41.26	*	45.00	*	48.00	*	55.00
4. PFY	*	245.01	*	260.00	*	280.00	*	320.00
5. PSF	230.06	161.03	230.06	165.00	230.06	195.00	230.06	210.00
FIBRE INTERMEDIATES								
6. ACN	30.00	26.52	30.00	26.00	30.00	26.00	30.00	27.00
7. CAPROLACTAM	70.00	58.32	120.00$	85.00	120.00	82.00	120.00	110.00
8. DMT/PTA	335.00	357.34	375.00##	370.00	375.00	390.00	375.00	450.00$$
9. MEG	194.90	132.51	not fixed		259.90	170.00	259.90	235.00
POLYMERS								
10. LDPE	193.00	175.95	192.00	170.00	193.00	177.00	193.00	200.00$$
11. LLDPE/HDPE	185.00	49.58	345.00@	270.00	345.00	210.00	345.00	310.00
12. PP	115.00	95.20	115.00	100.00	115.00	85.00	115.00	100.00
13. PS	40.00	27.75	40.00	30.00	40.00	38.00	40.00	40.00
14. PVC	283.24	276.47	383.24@@	300.00	416.24	340.00	416.00	496.00$$
SYNTHETIC RUBBER								
15. SBR	45.40	35.51	45.40	40.00	51.65$$$	25.00	51.65$$$	28.00
16. PBR	20.00	17.32	20.00	16.00	20.00	16.00	20.00	18.00
SYNTHETIC DETERGENT								
17. LAB	178.50	206.87	178.50	200.00	178.50	210.00	178.50	230.00$$
OTHERS								
18. PX	144.60	177.83	not fixed		144.60	195.00	144.60	210.00$$

Remarks :—

C = Installed Capacity as reported by the Industry.

P = Production.

* = Under broadbandig.

** = production assumed at 90% of total capacity.

= Includes new capacities of 27,000 MT of Indian Acrylic Ltd. and Consolidated Fibres Ltd.

= Includes DMT Capacity expansion of Bombay Dyeing from 60,000 MT to 1,00,000 MT.

$ = Includes capacity expansion of GSFC from 20,000 MT to 70,000 MT.

$$ = Higher production expected due to likely higher capacity/operating efficiencies.

$$$ = Includes capacity for latex and NBR also.

@ = Includes swing capacities of IPCL, Nagothane and Reliance Ind. Ltd. to manufacture LLDPE/HDPE.

@@ = Includes new capacities of 1,00,000 MT of Finolex Pipes Ltd.

ANNEXURE-V

LIST OF ATTACHED OFFICE AND PUBLIC SECTOR UNDERTAKINGS AND OTHER ORGANISATION UNDER THE ADMINISTRATIVE CONTROL OF THE DEPARTMENT OF CHEMICALS AND PETROCHEMICALS.

Attached Office

Office of the Development Commissioner (Pharmaceutical Industry)

Public Sector Undertakings

Hindustan Organic Chemicals Ltd., Rasayani (Maharashtra)

Hindustan Insecticides Ltd., New Delhi

Indian Drugs and Pharmaceuticals Ltd., Dundahera Industrial Complex, Dundahera, Gurgaon (Haryana)

Hindustan Antibiotics Limited, Pimpri, Pune (Maharashtra)

Smith Stanistreet Pharmaceuticals Ltd. Calcutta (W.B.)

Bengal Chemicals & Pharmaceuticals Ltd., Calcutta (W.B.)

Bengal Immunity Limited, Calcutta (W.B.)

Indian Petrochemicals Corporation Ltd., P.O. Petrochemicals, District Vadodara (Gujarat)

Other Organisations

Petrofils Co-operative Limited, P.O. Petrofils, Distt. Vadodara (Gujarat)

Central Institute of Plastic Engineering & Technology, Guindy (Madras)

MGIPF—794 M/o C & F/93—3000.