

# **RASHTRIYA CHEMICALS & FERTILIZERS LIMITED**

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## **THE TEN PRINCIPLES OF GLOBAL COMPACT**

United Nations Global Compact Office has outlined Ten Principles in the areas of human rights, labour and environment. It is expected that the Businesses should support and respect these internationally proclaimed principles within their sphere of influence. These principles have been derived from the earlier declaration by United Nations, ILO and other international organisations.

*Rashtriya Chemicals and Fertilizers Limited*, a Government of India Undertaking, has been supporting these principles throughout its inception. This report gives details on RCF's endeavours and achievements in observance of these ten principles.

The ten principles of UN Global Compact are:

### **HUMAN RIGHTS**

- **Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights within their sphere of influence.**

Rashtriya Chemicals & Fertilizers Ltd. has the faith that the responsibility for human rights does not rest with the Government alone. Since its inception, human right issues have been given top priority on Company's agenda. The issues of human right are not only confined to the workplace but are dealt with in broader perspective throughout the sphere of influence which deal with directly the

employees of the Company, business relations with dealers, customers, various organisations, surroundings and society at large.

### RCF and the Human Rights Issues

**Principle 2:** make sure that they are not complicit in human rights abuses.

Our country is a democratic country and believes in protection of human rights at all levels and activities. There have not been any incidences where either the state has forcibly relocated people or the company assisting state in relocation of people in relation to any business activity. Company's policies do not permit any act of silent complicity in suppression of human rights. Non-Complicity in Human Rights Abuses

## **LABOUR STANDARDS**

- **Principle 3:** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. Providing freedom of association is in the core principles of the company since its inception. Trade unions enjoy the freedom of association, propagation, representations, expression of grievances and participation in management processes. Freedom of Association & Collective Bargaining in RCF
- **Principle 4:** the elimination of all forms of forced and compulsory labour. Direct employment in the company is done through bilateral and mutual agreement between the company and the employee. This leaves no chance of any forced labour. The employee is free to leave the job any time and can get his dues. All the employees are covered under the Provident Fund and Gratuity Acts. This provides for

compensation from company towards the period of service completed in the company. [Elimination of Forced and Compulsory Labour](#)

- **Principle 5**: the effective abolition of child labour.

Indian law has strict provisions against employment of child labour. Our company being a government company we follow all Indian government rules. The minimum age for employment is 18 years.

During direct employment of workmen in our company, criteria of minimum qualification and minimum age are applied. Age is verified from birth certificate issued by statutory authorities, school leaving certificate etc. For indirect labour, i.e., contractors labour, although qualification is not the criteria, age criteria is applied. [Abolition of Child Labour](#)

- **Principle 6**: eliminate discrimination in respect of employment and occupation.

RCF has never allowed any discrimination on the basis of race, religion, political opinion or social origin in its employment related policies like remuneration, hours of work, paid holidays, maternity leave, security of tenure, advancement, social security and occupational safety and health etc. Recruitment criteria are based on qualification, skill and experience. [Elimination of Discrimination](#)

## **ENVIRONMENT**

- **Principle 7**: Businesses should support a precautionary approach to environmental challenges.

RCF has followed a philosophy of precautionary approach towards environmental management. RCF's Trombay as well as Thal facilities are situated amidst thickly populated area which thrusts the need of taking such approach. The company follows a detailed environmental management program, which includes systematic scientific studies to assess the risks to environment in cases of failures, impact assessment of the events of failures, emergency procedures, assessment for upgradation of plants and technologies in line with these studies and finally implementation of these changes to make the environment safe and fool proof from any failures. [Precautionary Approach to Environmental Challenges](#)

- **Principle 8:** undertake initiatives to promote greater environmental responsibility.

RCF firmly believes that all accidents are preventable. Management of occupational safety, health and environment is an important tool to achieve productivity and to avoid national loss. RCF has a well laid down SHE Policy. RCF believes that safety of all employees, customers, and neighbouring community is paramount to achieve and maintain reasonably high standards of safety and health of employees, plants, machines, and environment community at large. [Initiatives to Promote Greater Environmental Responsibility](#)

- **Principle 9:** encourage the development and diffusion of environmentally friendly technologies

RCF has been encouraging the development and diffusion of environmentally friendly technology. It has been a long term challenge for the company which has drawn the management and research

capabilities of the company. Encouraging Development and Diffusion of Environmentally Friendly Technologies

**Principle 10: Anti-Corruption:** Businesses should work against all forms of corruption, including extortion and bribery.

Rashtriya Chemicals & Fertilizers Ltd. has used its autonomy vested with the Board of Directors and expanded its goals and objectives aligning with the anti-corruption issues since inception of the Company. The Company promotes the rule of law. In all the dealings with the suppliers and other traders, the issues pertaining to promoting and preserving the rule of the law are ensured. Working against all forms of corruption, including extortion and bribery

## **GENERAL INFORMATION ABOUT THE COMPANY**

Rashtriya Chemicals and Fertilizers Ltd. (RCF) is a Public Sector Undertaking (PSU) of Government of India. RCF was incorporated on 6<sup>th</sup> March, 1978 on the reorganization of erstwhile Fertilizer Corporation of India Ltd. into five new companies. The authorized share capital of RCF is Rs. 800 Crores & paid up capital of Rs. 551.69 Crores. RCF has Chemicals & Fertilizer plants at two locations viz. in Trombay in Mumbai and Thal near ALibag in the State of Maharashtra producing Nitrogenous, Phosphatic and Potassic Fertilizers and a wide range of Industrial chemicals.

RCF's operations, as an independent entity, started from March, 1978 with the take over of all Mumbai based operations of the Fertilizer Corporation of India concerning manufacturing facilities at Trombay & Western and Southern marketing division of then FCI. RCF is the first Company in the country to utilize associated gas available from Bombay High Oil & Gas fields for its plants.

At the time of incorporation in March, 1978 the nutrients capacity of RCF was N - 90,000 Tons, P<sub>2</sub>O<sub>5</sub> - 45,000 Tons and K<sub>2</sub>O - 45,000 Tons, totalling 1,80,000 Tons/annum. Subsequently, these nutrient capacities were enhanced by expansion schemes, namely, Trombay IV expansion commissioned in 1978 and Trombay V expansion commissioned in 1982. The capacity was further enhanced by addition of Thal Unit in 1985. The present nutrient capacity is N - 10,54,170 Tons, P<sub>2</sub>O<sub>5</sub>- 1,17,200 Tons and K<sub>2</sub>O - 45,000 Tons yearly totalling to 12,16,370 Tons/annum. Industrial Chemicals were also added to Trombay as well as Thal Unit. These are Methanol, Methylamines, Nitric Acid, Conc. Nitric Acid, Sodium Nitrate/Nitrite, Sulphuric Acid, Ammonium Bicarbonate, etc. in Trombay and Methylamines, Dimethyl Formamide, Dimethyl Acetamide,

Carbon Monoxide and Formic Acid in Thal Unit. RCF also entered into marketing of by-products namely Ammonium Nitrate, Argon, Carbon Dioxide, Gypsum, Chalk, etc. which are produced during the production of primary products. The Company is also producing Bio fertilizers at its Trombay Unit since 1998.

In order to sustain the plants in best operating conditions and to upgrade the technology for optimization of energy, RCF revamped & modernized its old plants. Under this scheme, Complex Fertilizer N:P:K 15:15:15, Ammonia I, Nitric Acid and Bagging Plants have been upgraded in Trombay Unit. RCF also modernized its Effluent Treatment Plant for maintaining best environmental standards. A Sewage Treatment Plant was installed & commissioned at Trombay. The plant processes raw sewage from Mumbai Municipal Corporation to produce treated water usable in plants. At Thal, Ammonia Plant has been retrofitted for enhanced production and efficient energy consumption. To combat the problem of shortfall of Natural Gas, Naphtha Feed Supplement Scheme has been installed at Thal. Urea Plants at Thal have also been revamped for reduced energy consumption by implementing Urea Optimization Project.

Together with the aforesaid addition of capacities of fertilizer nutrients and Industrial products, marketing activities have increased by trading operation in fertilizers. The annual turnover in the year 2003-04 was Rs. 2427 Crores (nearly 0.5 billion US\$).

RCF has acquired ISO 9002 certification for its DMF, DMAC and Methylamine products of Thal. Both the manufacturing units of the Company have also been awarded ISO 14001 certification for "Environmental Management System". RCF has been signing Memorandum of Understanding (MOU) with Government of India since

1988 every year. The goals are set for various operations like financial performance, quality assurance, customer training, employee training, safety, environment, production, efficiency reduction in severity and frequency of accidents, hazard control etc. Based on achievement of these targets, the Government has rated the Company as “Excellent” for the last 5 years.

### **Mission of the Company:**

The Company has adopted the following mission:

To become the market leader in the field of production and sales of fertilizers and industrial products by producing economically at Global standards and in environment friendly manner, providing quality service and support and also join hand in the growth of national economy.

### **Objectives of the Company:**

The main objectives of the Company are as under:

- To produce and market fertilizers and chemicals efficiently and economically in an environmental friendly manner.
- To maintain optimum levels of efficiency and productivity in the use of resources and to secure optimal return on investment.
- To take up and implement schemes for energy saving.
- To promote self-reliance in Company’s operations including process know-how, Design, Engineering, Erection, Commissioning, operation & maintenance of plants and marketing of products with special emphasis on Research & Development.



- To aim at international standards of excellence in production and quality of products & services.
- To continuously upgrade the quality of human resources and promote organizational and management development.
- To enhance safety standards.
- To care for and protect the environment and to ensure that the emissions, atmospheric discharges and effluents are within the limits stipulated by the statutory authorities like Central and State Pollution Control Authorities and to fulfill all the requirements specified under ISO 14000 standards.
- To ensure corporate growth by expansion as well as by diversification.
- Ensure availability of Chemical Fertilizers, Bio Fertilizers, Micro-nutrients to farmers and provide a wide range of services to farmers for soil testing, fertilizer application etc. and to impart training and education to farmers in the related field.
- To care for the community around especially SC/ST and other backward classes.

### **Company's Vision**

With the objective of systematically stepping into the first decade of the millennium with a charter plan of action and growth, the Company has set itself a Vision to achieve a turnover target of Rs. 3737 Crores by the year 2006-07. To achieve this requires further improvement in work culture, conscious cost cutting measures, frugality in our day-to-day activities, further reduction in the cost of production, improving our marketing efforts, catering to

customer requirements and the strictest adherence to safety and environmental standards.

## **1.0 RCF AND THE HUMAN RIGHTS ISSUES**

Rashtriya Chemicals & Fertilizers Ltd. has the faith that the responsibility for human rights does not rest with the Government alone. Since its inception, human right issues have been given top priority on Company's agenda. The issues of human right are not only confined to the workplace but are dealt with in broader perspective throughout the sphere of influence which deal with directly the employees of the Company, business relations with dealers, customers, various organisations, surroundings and society at large.

RCF is a Public Sector Undertaking Company with Government of India as 92.5% shareholder. Being owned by the government, it has to follow all the legal requirements and principles applicable in the Country as the minimum. The Company has used its autonomy vested with the Board of Directors of the Company and expanded its goals and objectives aligning with the human rights issues since inception of the Company. Compliance of legal principles and guidelines is regularly being followed. These are also being monitored by the Company as well as by various government agencies.

Rashtriya Chemicals & Fertilizers Ltd. promotes the rule of law. In all the dealings with the suppliers and other traders, the issues pertaining to promoting and preserving the rule of the law are ensured. The Company has made observance of human rights issues mandatory as a part of prequalification and execution of contracts related to the supplies or the services required for the

performance of the business. The Company has made provisions to ensure that human rights are not violated by the contractors towards their employees also.

## **1.1 ADDRESSING CONSUMER CONCERNS**

Rashtriya Chemicals & Fertilizers Ltd. deals with internationally reputed suppliers under predetermined prequalification criteria. The business is done only with the reputed and world renowned parties. The Company has throughout undertaken a proactive approach towards the consumer by setting up a separate wing for the publicity and promotions who directly approach the end users and ensure that they are not exploited by the intermediaries.

## **1.2 ENHANCING WORKER PRODUCTIVITY**

### **Suggestion Scheme**

Rashtriya Chemicals & Fertilizers Ltd. is one of the first companies which implemented Suggestion Schemes. This scheme is under implementation in RCF since 1965. Main objective of this scheme is to utilize the creativity of individuals through suggestions. In other words this is a forum which promotes employee's intellectual contribution in the management process. The Suggestion Scheme in RCF is not confined to any particular area but encompasses different ideas which help the organization in wastage reduction, conservation of resources, pollution control, efficiency improvement and every other aspect which improves quality of life of our esteemed employees. RCF is also a corporate member of Indian National suggestion Scheme Association(INSSAN) which is

the umbrella organization for suggestion schemes in Indian Industry.

### **Quality Circle Movement: Participation for Progress**

Quality Circle is a small group consisting of concerned personnel associated with a particular function. The group aims at identifying all the associated problems. Its systematic analysis using problem solving tools and techniques of Quality Circle so as to reach to the root cause of the problem and finding out probable solutions, selection of an ultimate one, working out the action plan for implementation of the solution in order to ensure that the function is performed to the possible perfection.

Quality Circle, a technique for bringing improvement in the existing systems and practices, still has not lost relevance even after two decades of arrival in India. QC came to India in 1981 when BHEL, Hyderabad established the first Quality Circle. QC started its functioning at RCF Ltd. Mumbai in 1988 and has been growing steadily. We are having more than 60 Quality Circles functioning at Trombay and Thal Units. It has been instrumental in solving about 450 problems restructuring and a saving of approximately Rs.16 crores for the organization.

### **Productivity Awards**

The concept of productivity though occupies a top niche in the Management Parlour - has of late gained tremendous emphasis in view of the economic reforms launched by the Government of India. Though for many, this concept of productivity may appear remote - it was never so with Rashtriya Chemicals & Fertilizers Ltd. Long back, this organization has institutionalized this

productivity culture by setting up a full-fledged Industrial Engineering Department, which basically acts as a change agent. By encouraging "People Based Productivity Movement" - we have already made this concept very popular. The organization firmly believes that higher productivity alone can help the Company emerge "Excellent". Production Incentive together with Material Utilization concept has helped the organization sustain higher productivity over a long period. Use of network planning has helped achieve higher capacity utilization. Through Suggestion Scheme and Quality Circles, the employees have continuously tried to enhance material and labour productivity, in addition to the effort of building mathematical models for practical application.

To cap all these efforts, the integrated scheme for Productivity Award had been instituted in the year 1991 after the name of one of India's most illustrious son Bharat Ratna Dr. B.R. Ambedkar, who had been a torch bearer for the underprivileged and poor and also the father of the Indian Constitution. This award will be given annually to the best productive Plant / Department in the whole of the organization. The integrated scheme takes into account various factors like Capacity Utilization, Labour Productivity, Material Productivity, Inventory Management, Repairs and Maintenance Cost, Manpower Management, Safety, Work Environment, Stream Days and Contribution, etc.

This effort is to ensure the proper utilization of various resources of production leading to high level of productivity in every aspect of manufacturing. Dr. B.R. Ambedkar Productivity Award thus instituted consists of a revolving trophy and Rs.25,000/- cash award. The award will be presented every year to the Plant /

Department, which, on assessment by the evaluating committee, merits the highest score as per the scheme.

The Company treats its workers with dignity. The employees of the Company are honoured once they complete 25 years of service. Special trophy is given to these employees and the Company expresses its gratitude towards these employees for their contribution in the growth of the Company. These felicitations are done on two National days of the country.

### **1.3 BUILDING GOOD COMMUNITY RELATIONSHIPS**

RCF is committed towards its specific social objectives such as development of entrepreneurs, ancillary industries, special assistance to scheduled class and scheduled tribes and other backward classes of the society. The company has got a good name in the local community due to its close liaison with the neighboring residents and ensuring that the Company's operations are not causing any harm to them.

### **1.4 TRAINING**

The company has been training its staff through unit level classes, where the staff gets trained in the issues pertaining to human rights.

- ▶ Workers' Education Scheme
  - Imparting expertise in Labour Legislation, Industrial Relations and Union functions
- ▶ Unit level classes including exclusive classes for women employees
- ▶ Union leadership development

- ▶ Extensive use of computers and Local Area Networking for knowledge development.
- ▶ Quality Circles and Suggestion Schemes
- ▶ Excellent Facilities for in-house Training & Development
- ▶ Training in Technical, Functional and Behavioral Areas
- ▶ Hands-on training, Multi-skilling techniques
- ▶ Excellent Conference facilities ,  
Laboratories/Workshops/Simulators
- ▶ Graduate Apprentices' Training
- ▶ Management Trainees' Programme
- ▶ Library ,Computer Learning Centres
- ▶ In-house programmes for stress management, cancer, HIV/AIDS

## **1.5 SOCIAL ACTIVITIES**

As one of its corporate goals, the company has undertaken the following social activities:

- ▶ Free Accommodation for underprivileged cancer patients during treatment
- ▶ Blood donation Camps
- ▶ Free medical check-up for slum residents in vicinity
- ▶ Providing medical facilities to devotees during Dr. Babasaheb Ambedkar Mahanirwan Diwas Devdasis' Rehabilitation Programme– upliftment of Devdasis and their children, rehabilitation centers, providing work-sheds and sericulture machinery .
- ▶ Tribal Youth Development Programme – established Carpentry Training Centre, providing carpentry tools and machinery.



Tribal youths trained by Gram Mandal Voluntary Organizations, imparted practical work experience for livelihood.

- ▶ Vanrai Bandhara – Technique of water management and conservation.
- ▶ Opened many schools in rural areas for primary education.
- ▶ Rural hygiene and sanitation.

**For unprivileged and underprivileged classes of the society:**

- ▶ Change in Life Style and Economic Status by providing education and training and Career development at Company's cost.
- ▶ 200 students adopted. 135 serving RCF.
- ▶ Food and Accommodation
- ▶ Uniforms, Text Books, Stationary Special Coaching
- ▶ Laboratory
- ▶ Medical Treatment
- ▶ Sports, Library and Recreational Activities

**1.6 HRD ACTIVITIES**

The following activities are undertaken for development of Company's Human Resource

- ▶ Training and Development
- ▶ Internal Consultancy
- ▶ Surveys, Research Projects
- ▶ Programmes in Association with reputed Professional Bodies
- ▶ Diploma in Computer Course recognized by Maharashtra Technical Board
- ▶ Conducting customised programmes for other organizations e.g. IPCL, Reliance, CIPLA, HOC etc. Profit Centre concept.

- ▶ RCF has trained personnel of South Korea , Tanzania, China, South Africa, training for engineers from Turkey and assisted setting up of training facilities, Ankara.
- ▶ Nomination of employees for Training Programmes/Seminars/Conferences in India and Abroad.
- ▶ RCF engineers successfully commissioned Methylamine and DMF Plants in China, Methylamine Plant in South Africa, Ammonia-Urea Complex in Bangladesh etc. and provided training to engineers / operators.

### **1.7 SAFE AND HEALTHY WORKING CONDITIONS**

The company has always ensured healthy and safe working conditions for its workers. Some of the conditions are stipulated under statutory regulations and are generally mandatory. Some of the steps are voluntarily taken to ensure safe and healthy working conditions. These are:

- ▶ Monitoring of environment and health check-up of employees.
- ▶ Safe and efficient operating practices. Reviewing and updating these practices from time to time.
- ▶ Implementation of safety precautions, rules and programmes as a line function
- ▶ Adoption of the State-of-the Art technologies and processes, changes in process technology to enhance safety and environment quality.
- ▶ Employees and public awareness campaigns through booklets. Safety training for own and contractors' employees.
- ▶ Mutual Aid Scheme with neighbouring industries, local authorities.

## **1.8 FREEDOM OF ASSOCIATION**

The company has always guaranteed freedom of association. The company has recognized union. The union representatives are elected through electoral process. All the workers have right and freedom to vote and elect their representatives on the union. Union representatives take up the matters pertaining to the workers to the management. Unions are free to display their notices on the company's notice boards.

The company has ensured that there lies no discrimination on the basis of caste, creed and sex. Special attention has been given for upbringing of underprivileged and unprivileged classes of society. Women employees are respected and are given special attention. The following steps have been taken by the company to protect the rights and upbringing of these classes of the society.

## **1.9 SPECIAL ATTENTION TO WOMEN EMPLOYEES**

- ▶ Around 80 widows employed on compassionate ground, allotted light and office jobs.
- ▶ Maternity benefits: 3 months + 1 month paid leave provided.
- ▶ Sports activities for female employees on Annual Sports Day.
- ▶ In collaboration with various local bodies in the interiors of the villages, free sewing machines, gohar gas plants etc. are distributed to needy women. Initiated all women's group at Aurangabad district to make them financially independent.

## **1.10 WAGE STRUCTURE & EMPLOYEES WELFARE MEASURES**

### **Wage Structure:**

The company follows a wage structure for its employees which is approved by the Government. For all other labour connected with the business of the company, it is ensured that no forced labour or child labour is employed and all labour get the minimum wages as per the Act.

### **Employees Welfare Measures:**

#### **Township**

- ▶ Landscaped Secured Township with around 3400 quarters for employees
- ▶ Community Hall for 2000 persons and 3 Consumer Cooperative Stores.
- ▶ Educational, cultural and sports facilities.

#### **Hospitals**

- ▶ 35 Bed Hospital at Trombay and 30 bed Hospital at Thal with full time doctors and honorary specialists.
- ▶ Free medical treatment to employees and dependents.
- ▶ Facilities for X-Ray, ECG, ENT, Ophthalmology, Dental, Pathology.
- ▶ Ayurvedic and Homoeopathic treatment.
- ▶ Free medical facilities for the retired employees in Government Hospitals or at Government Hospital rates.
- ▶ Referral to reputed hospitals and specialists.

- ▶ Family welfare and vaccination programmes.
- ▶ Regular medical check up, ECG, X-Ray, PFT, Audiometry, Pathology tests through Occupational Health Centre.
- ▶ Industrial Health Physician

### **Co-Operative Credit Society**

- ▶ Authorised share capital of Rs.2.91 Crores. 4482 employees are members
- ▶ Long term and Short term loans
- ▶ Financial Assistance for Household items (Consumer Loans)
- ▶ Regular Dividend
- ▶ Distribution of Gift Articles

### **Social aid**

- ▶ Social worker for counselling (individual and group) on:
  - Habitual Absenteeism,
  - Alcoholic addiction,
  - Marital discord,
  - Psychiatric problems
  - HIV, stress / anxiety etc.

### **Education for employees' children**

- ▶ Private and Municipal Schools
- ▶ Educational expenses reimbursement.
- ▶ Recognition of good academic performance.

- ▶ Programmes by Corporate Management Development Centre
  - Career guidance
  - Computer orientation programmes
  - Creativity workshops

### **1.11 SOCIETAL COMMITMENTS & RESPONSIBILITIES**

RCF built its plant at Thal Unit on land leased by Government of India. Part of the land was being used unauthorisedly by the local residents. The company however took a sympathetic view and declared the persons as Project Affected People. These persons were granted employment in the company as well as alternate land / accommodation in the nearby area.

The company has taken adequate care to protect the economic livelihood of local community. The marine outfall line of Thal plant was originally planned at different place which was coming in the way of local fishermen. Although this area was properly allotted to the company by the government authorities, the route of marine outfall was changed so that the livelihood of nearby fishermen is not affected.

The company uses Central Industrial Security Force (CISF) for protection of its production units and assets. The CISF is an autonomous body and follows all the rules and regulations laid by the Central Government which are in tandem with the international guidelines and standards.

The Company recognises that business is not an activity of isolated individuals. Business owes its existence to the society. The social

responsibility of business is therefore a fundamental element in our business ethics.

The prime social responsibility of our business is to give its customer his money's worth by setting standards of quality and integrity, which give the customers a fair deal.

Another major social responsibility is respect for the physical environment in which we live. Our business establishment considers itself trustee of the natural environment with which it is endowed. Hence, it recognizes the dignity and worth of every human being.

RCF has been shouldering the social responsibility right from its inception, being a public sector undertaking with total social accountability. We are amongst a few organizations to set up manufacturing unit in rural area. This was done with a view to ensure economic development of a backward area. Besides our business interests we have also contributed directly and indirectly to the development of infrastructure in the area. Construction of jetty, roads, bridges, supply of drinking water to neighbouring villages, assistance to schools etc. are some of the examples. This has resulted in enhanced entrepreneurship development and growth of allied businesses in the area. RCF's commitment to its obligation and responsibility is reflected in its statement of objectives :

- To help increase the national agricultural productivity by providing agricultural inputs and services.
- To provide the above inputs and services with least consumption of real resources and at least cost.

- To obtain for its employees as decent a standard of living and as good a quality of life as possible, consistent with the general socio-economic conditions in the country.
- To secure as high a return on the rate of investment as possible, keeping in view the requirements of other competing objectives.
- To promote self-reliance in all activities in relation to Company's operations including process know-how, design and engineering, erection, commissioning, operations, maintenance of plants and marketing of products.
- To manufacture and market industrial chemicals related to agricultural inputs and also others based on similar technology and intermediates, by-products, co-products and waste from the main operations.
- To promote, organise, and perform research and development in products, technology, engineering, soil science and agronomy in furtherance of various corporate objectives.
- To improve the environment and minimise to the maximum extent technologically possible, the harmful emissions, atmospheric discharges and effluents.
- To continuously upgrade the quality of human resources and promote organisational and management development.
- To co-operate nationally and internationally in exchange of information and services of personnel.
- To have corporate growth at a pace consistent with availability of resources and developmental needs of the economy.



- To promote specific social objectives such as development of entrepreneurs, ancillary industries, special assistance to SC/ST and other backward classes.

Our commitment to social responsibilities is broadly classified under the following heads :

1. Customer Care
2. Concern for environment
3. Concern for the society

### **Customer Care**

Maximum customer satisfaction and an integrated network of factory to farm services is the backbone of RCF's marketing strategy. The Company provides a full range of marketing services including sales, fertilizer promotion, agricultural research and free agronomical services.

### **Soil Testing and farm services**

In order to help the farmer choose the best possible fertilizer for his crop, soil testing is carried out in our mobile and static labs. Agronomical advice on efficient use of resources is provided to the farmers free of cost. RCF makes available quality balanced fertilizers through efficient farm services comprising of direct farm activities, dealer development and support services, fertilizer logistics, warehousing and transportation.

### **Experimental Farms**

In order to ensure smooth transfer of technology from lab to field RCF has a well developed experimental farm. A plot of land admeasuring 15 hectares has been developed at Thal to provide modern and scientific agricultural services to the farmers. New high yielding

varieties of crops are demonstrated to them for easy acceptability. Modern techniques of agriculture and irrigation like drip irrigation, energy saving devices etc are also demonstrated. Experiments on the use of factory effluents for irrigation with different crops have yielded encouraging results. The farm provides excellent scope for the testing of new products like Ammonium Polyphosphate, urea nitric phosphate, foliar and drip grade complex fertilizers etc.

### **Farmers' Training & association with Agricultural Universities**

Another striking feature of our marketing services is the establishing of the **Farmers Training Institute** at Nagpur in collaboration with the Punjabrao Krishi Vidya Peeth, Nagpur. The main aim of this institute is to provide **scientific training to small and marginal farmers** (particularly with small holdings) and also to impart training to women farm labourers. It also provides a package of modern farm practices developed by RCF and the University, towards quick transfer of technology at the village level. Another Farmers training institute has been set up Thal for the benefit of farmers in Maharashtra, especially from the Konkan region. RCF publishes farmers' guides which gives data on various inputs of agriculture and farming. Its magazine gives detailed and updated information on balanced use of fertilizers, cropping patterns, crop protection etc.

### **Concern for environment**

Protection of the fragile environment has always been our priority. Our compliance with the ISO 14000 standards reflects our commitment to eco-friendly manufacturing systems and practices. Through continuous and proactive modernization of plants and upgradation technology, we are committed to follow the latest

environmental norms stipulated by the various regulatory bodies thereby setting an example as an eco-friendly, caring organization.

Besides upgrading the plants to bring down emission levels, RCF believes in the balancing the eco system by ensuring plantation of trees and recycling industrial waste.

### **Chembur Green**

Under the banner of Chembur Green project RCF distributes free saplings in and around Chembur and organizes plantations at various social and educational institutes and housing societies. Efforts in this direction have helped in keeping the environment clean and green.

### **Sewage water treatment**

RCF commissioned India's largest sewage water treatment plant at its Trombay unit. Called Sujala, the plant is set up at a cost of nearly Rs 40 crore and has a capacity to treat 5 million gallons of raw sewage water per day.

### **Concern for the society**

#### **Integrated Rural Development Programme**

In addition to making quality products and services available to farmers, the Company is committed to improving their socio-economic conditions. The Integrated Rural Development Programme flows out of this objective. As part of this, 10 to 15 tribal & backward villages are adopted each year from different states in the Company's marketing territories for all round development. These programmes are carried out in association with zilla parishad, district rural development financial institutions and voluntary organizations. The major activities normally covered under the IRDP include :

### **Basic Need Development Programme**

This includes providing for basic needs of the community like construction of community hall, library buildings, drinking water facilities, lift irrigation facilities for small/marginal farmers, bus shelters, etc. We plan to actively participate in watershed development programme particularly for development of new cropping patterns which will be economically beneficial to farmers.

### **Public Health & Village Sanitation Programme**

Under this programme, medical camps, veterinary camps, vaccinations etc are organized. Stress is also laid on use of lanterns with biogas systems, compost piles, etc. Use of smokeless gas burners is also encouraged.

### **Agriculture Need Development Programme**

This programme aims at supporting the farmers to increase their productivity by providing them know-how on new package of practices, as well as provide the necessary inputs like improved seeds, fertilizers, as well as agricultural implements like spray pumps and ploughs in the adopted villages by using Govt. subsidy. In addition, fertilizer/crop demonstrations are conducted to show the effectiveness of scientific package of practices to the farmers.

### **Subsidiary Occupation Development Programme**

Under this scheme, training and support is given to farmers to develop subsidiary occupations to augment their income. Some of the areas where training has been imparted are : weaving, bee keeping, tailoring, dairy & poultry development, flour mill operations, etc. We also provide modern tools to village artisans to enable them to produce quality products.

### **Farm Labour Training**

Labour plays an important role in farm productivity. They are also required to be informed about the different techniques available to improve effectiveness of operations through training programmes which are being conducted regularly.

### **Social Forestry & Waste land development**

Denudation of forests is posing a serious ecological threat to the country. Afforestation of waste-land and horticulture are propagated through distribution of saplings in different areas.

### **Youth and Women Development Programme**

This programme facilitates the formation of youth and Mahila Mandals at village level. Different competitions are organized periodically. The youth are also imparted training in rural sports, cottage industry, etc.

### **Social & Cultural Activities**

Along with economic development, the Company encourages the organization of social/cultural activities in the adopted villages.

In the coming years these activities will be further strengthened and new avenues will be explored.

### **European Economic Community Project (EEC Project) for rural agricultural development:**

RCF is one of the four companies in India who were selected to implement RCF-EEC Agricultural Development Project. This project was financed by European Economic Community as a part of national strategy propagated by Ministry of Agriculture, Government of India

involving structural development in rural economic condition. The project was implemented in two phases viz. from 1985 to 1988 and from 1989 to 1993 respectively. The objectives of the project were:

- Improve the productivity of agriculture activity by educating farmers about scientific farming and
- Enhance thereby the financial status particularly of small / marginal farmers and SC/ST farmers.

Accordingly, about 400 villages were identified by RCF for this purpose. The educational methods included crop demonstrations, farmers' meetings, compost pit demonstrations, education through films, literature, wall paintings etc. The motivational activities included crop competition, distribution of mini kits of fertilizers at subsidised rates, community sports with fertilizer bags as prizes, incentives for compost pits and biogas plants. For economic development of farmers, monetary aids were extended for taking up subsidiary activities such as poultry, sericulture, sewing, carpentry, pottery making etc. In all about 40,000 farmers were trained / benefited by the Company under this project within a span of about seven years.

## **2.0 NON-COMPLICITY IN HUMAN RIGHTS ABUSES**

Our country is a democratic country and believes in protection of human rights at all levels and activities. There have not been any incidences where either the state has forcibly relocated people or the company assisting state in relocation of people in relation to any business activity. Company's policies do not permit any act of silent complicity in suppression of human rights.

The country has identified backward classes of the society and has made provisions for special attention and protection to these by way of providing reservations in the employment, free education and other various facilities. Our company being a government organisation follows all the guidelines laid by the Government.

Along with the technological changes brought in the operating plants of the company, it was ensured that modernisation of the plants do not affect the rights of the employees, like forced retirement from services etc. Even after closure of some of the processing units of the company, the company has resorted to redeployment of surplus employees in diverse areas of operation. The company has offered voluntary retirement scheme to the employees who can opt for this in lieu of substantial compensation for their livelihood. Many of the employees have volunteered to avail this opportunity. As a result, the company is able to sustain the requirements of changing business in the modernized plants.

The business environment is witnessing changes due to Globalisation and the related problems are expected to percolate down below. However due to our strong foundation in the belief of protection of human rights, the company is confident of not getting affected with

the challenges of globalisation to ensure that the human rights will always be protected.

Although being a government owned company, the Board of our company is an autonomous body. The company has its own agenda towards protection of human rights. Hence it is not affected either by state or by the influences of Non-governmental organisations.

The company maintains transparency in its business practices. Accounting standards which are prevalent in the country are followed rigorously. The company undergoes various audits. It has its internal audit department separately. The company is aware of recent problems in the renowned corporate sectors and accordingly the issues of transparency are always taken care of as a part of Corporate Governance.

The company has spelt out its policies towards human rights very explicitly. This encompasses all the issues directly or indirectly related to its business activities. The protection of human rights is not only ensured for its direct employees, but is also ensured through written agreements and contracts with the service providers or the down the line in the supply chain for the labours employed by them.

The Company has established a Human Resource Development Department that monitors compliance to human rights issues of the employees.

RCF has employed Central Industrial Security Force, a Government agency for security of its premises. This makes security issues impartial. The security is strictly limited to guarding company's assets and they are not permitted to interfere with any of the company's matters. The company extends all the facilities to the security



personnel which are given to company's employees. These include befitting accommodation, medical, welfare, social and recreational facilities etc.

The Company volunteers in social activities pertaining to protection of human rights like rehabilitation of Devdasis, adoption of villages for their overall upbringing, offering patronage to children of backward classes of society by way of providing them lodging, food, education and employment etc. In the course of such activities, the company interacts with other human-rights organisations.

RCF has established a Youth Council- an in-house organisation for all-round development of youth. This encourages youth to take part in various social activities. These activities include Blood Donation camps, health check-ups, physical training on Yoga and breathing, social activities like providing help in major crisis like earth quakes, floods, war etc.

### **3.0 FREEDOM OF ASSOCIATION & COLLECTIVE BARGAINING IN RCF**

Providing freedom of association is in the core principles of the company since its inception. Trade unions enjoy the freedom of association, propagation, representations, expression of grievances and participation in management processes.

The Company respects and ensures security of representation and strives for solutions which will build trust on both sides. There is no restriction on number of trade union formation in the company. The company predominantly deals with the recognised trade union as per the prevailing statute. However, the issues raised by non-recognised trade unions are also taken into consideration while framing a common policy for the workmen. Trade union representatives are elected through democratic process of election. All the facilities are provided free of cost by the company to conduct elections of trade union representatives.

Trade union representatives are granted paid leave in the course of performance of their activities based on the requirement. Rights of collective bargaining are well protected. As a result, there is a harmony in the workmen and the management which strengthens the progressive working of the organisation.

RCF is one of the first few Public Sector Undertakings who have negotiated with the Union and arrived at a satisfying wage revision settlement. Salient features of wage negotiations are as under:

- RCF is one of the first few PSUs to arrive at Wage Revision Settlement effective 1/1/97 to 31/12/2006 in line with Government of India guidelines on wage settlement.

Freedom of association and direct participation in the activities like Safety Health and Environment through a properly constituted Central Standing Committee on SHE issues has imbibed amongst the workmen a feeling of belongingness towards the Company. The other activities concerning participative management like, suggestion scheme and quality circles have further strengthened this feeling. All these have directly reflected in excellent performance and enhanced productivity of the company throughout the operations of the company in various areas and in maintaining harmony. Women enjoy special privilege in representing workmen and are given full freedom in conducting the activities and associating in participative management process.

The workers' representatives are provided with full facilities by the company free of charge. A well furnished office along with the office infrastructural facilities like telephone, computer, furniture etc. has been provided. The unions display their notices on the company's notice boards. All these help in smooth functioning of the unions in the company.

The unions have the free hand to collect union dues on company premises, posting trade union notices on the company's notice boards and distributing union documents related to day to day trade union activities in the company.

The company recognizes representative organizations for the purpose of collective bargaining. The leaders from the trade unions which are not the employees of the company are also invited for talks. The

unions seek guidance from the trade union leaders which helps union representatives in the company to understand issues in a better way and in the perspective of industrial background prevalent in other similar organisations for better negotiation with the management.

The management gets constant feedback from the trade unions regarding the issues concerning workmen. This helps in better understanding of the problems of the workmen which facilitates the process of bargaining. Working conditions, terms of employment and relations between employers and workers etc. are discussed during the collective bargaining and any grievances are redressed during these meetings.

The company believes that trained manpower is everlasting and ever paying strength of the organisation. Considering this as the philosophy, the company has established exclusive training institutes at Trombay and Thal for technical training in the work related areas as well as a Corporate Management Development Centre to impart training in the fields of human behavioural and managerial aspects. The company has a full fledged training department. The company fully undertakes the responsibility of identifying the training needs as well as ensuring the training as per the requirement. Due to its trained manpower, the company has been able to provide services of its manpower for operation of other industries in the country as well as abroad like Algeria, Bangladesh, Saudi Arabia, Bahrain, Oman etc. for various operations, maintenance and project related jobs. In the country, company's manpower was deployed for commissioning of plants at Shahjahanpur, Namrup etc. The company not only trains its manpower, but also other organisations of the country and abroad. Safety and health issues, grievance and dispute settlement

procedures, disciplinary rules, and family and community welfare are taken care of by the company.

The company believes in transparency with respect to the information. It is ensured that the trade unions are given complete information on the statutes and requirement of the management for which the bargaining is called for. This helps union in understanding the concerns mutually. This practice has always helped in quickly arriving at mutually agreeable amicable solution to all the issues.

The company considers that the workers and its representatives are part and parcel of the organisation and perfect harmony in working together is the key to productivity and prosperity. With this philosophy, the company considers it imperative to protect its unions and the leaders from any legal problems arising out of union's normal activities. Also, while ensuring freedom of association and collective bargaining, the company takes in to account various laid down policies of the government and the climate of labour-management relations in the country. Statutory framework and other limitations are explained to workers' unions during the negotiations.

Trade unions working in the company are the representation of local and national trade unions. The company has always supported their establishment for the cause of true and fair representation of workers. The company fully endorses the views of UN Global Compact and intends to respect as well as practice its provisions, including those on fundamental workers' rights. The company has brought these principles in practices and keeps informed the local community, media and public authorities about the same from time to time.

#### **4.0 ELIMINATION OF FORCED AND COMPULSORY LABOUR**

At the time of receiving employment, an employee and the company have to mutually enter into an agreement called Part-II order. This order spells out all the terms and conditions of employment. This agreement is a two way agreement, in which the employee can leave company upon giving a notice of 3 months. If an employee wishes to leave company prior to the aforesaid notice period, he can do so by surrendering leave equivalent to 3 months or part thereof depending on the period short of notice period. In case the employee does not have sufficient earned leave in balance, he can pay amount equivalent to 3 months pay or forgo the amount equivalent to the amount from his dues during final settlement. As per the legal provisions, the company has no right to withhold any employee upon following the stipulated procedures. All these procedures and the provisions of the contract are available on company's intranet site also and are accessible to all employees all the time.

Direct employment in the company is done through bilateral and mutual agreement between the company and the employee. This leaves no chance of any forced labour. The employee is free to leave the job any time and can get his dues. All the employees are covered under the Provident Fund and Gratuity Acts. This provides for compensation from company towards the period of service completed in the company. The practice of lodging financial deposits with the company is not prevailing in RCF. Employment of prisoners has never been done by the company.

The company has expanded its business by setting up a mega project at Thal, about 100 km from Mumbai. It has also expanded its plants at Trombay in Mumbai. It was ensured that during these expansions,

forced labour was not employed directly or indirectly through contractors.

## **5.0 ABOLITION OF CHILD LABOUR**

Indian law has strict provisions against employment of child labour. Our company being a government company we follow all Indian government rules. As per the Factories Act, 1948, the minimum age for employment as adult is 18 years.

During direct employment of workmen in our company, criteria of minimum qualification and minimum age are applied. Age is verified from birth certificate issued by statutory authorities, school leaving certificate etc. For indirect labour, i.e., contractors labour, although qualification is not the criteria, age criteria is applied. The company does not involve in any business that employ child labour.

The company has employed Central Industrial Security Force for security of its production facilities. The company's premises are declared prohibited for open entry under Section-2, subclause c & d of Official Secrets Act, 1923 of constitution. The entry is thoroughly checked and hence there is no question of entry of child labour inside the factory.

The company is completely against child labour and does not permit any of its subcontractors for employment of child labour.



## **6.0 ELIMINATION OF DISCRIMINATION**

India is a secular country and takes pride in being world's largest democratic country. While formulating constitution of India, adequate care has been taken to ensure that discrimination of any sort is weeded out from the society. RCF, being a Government owned company, has never allowed any discrimination on the basis of race, religion, political opinion or social origin in its employment related policies like remuneration, hours of work, paid holidays, maternity leave, security of tenure, advancement, social security, occupational safety and health etc. Recruitment criteria are based on qualification, skill and experience. To accentuate the feeling of oneness irrespective of caste and creed, colour, race etc., the Company has provided uniform clothing to all its employees. Employment, promotion, housing facilities, welfare, hospital, canteen, social facilities etc. are extended to all on equality basis without any discrimination with respect to caste, race etc. RCF is Government of India undertaking and hence it has to follow Government rules. As per these, certain reservations are provided to Scheduled Caste, Scheduled Tribe and Other backward classes for employment.

## **7.0 PRECAUTIONARY APPROACH TO ENVIRONMENTAL CHALLENGES**

RCF has followed a philosophy of precautionary approach towards environmental management. RCF's Trombay as well as Thal facilities are situated amidst thickly populated area which thrusts the need of taking such approach. The company follows a detailed environmental management program, which includes systematic scientific studies to assess the risks to environment in cases of failures, impact assessment of the events of failures, emergency procedures, assessment for upgradation of plants and technologies in line with these studies and finally implementation of these changes to make the environment safe and fool proof from any failures.

The company has adopted a very safe approach towards the risks arising out of its production facilities towards environmental issues. The company is in operation since past 40 years and has a very good track record of maintaining and operating its production facilities in environmentally friendly manner. The company had a huge capacity for import and transportation of ammonia. All the precautions were taken for maintenance of this facility for its safety. However considering the precautionary approach, the company decided to scrap this facility along with a storage facility so that there is no threat to environment in the events of sabotage or war like situations. RCF revamped all its plants due to its precautionary approach towards the environmental issues.

RCF is one of the pioneer companies which were established for production of fertilisers for growth of food grains at the time when the country was severely deficient of food grains and had to depend on its imports. RCF has contributed towards this noble cause and used

countries natural resources for this noble cause. The company has not resorted to any undesirable use of precious resources.

RCF has followed a philosophy of prevention rather than control of environmental damage by way of pollution. The company strongly believes and practices that the best way of pollution control and protection of environment is controlling pollution at source. RCF has invested huge capital in prevention of environmental damage by implementation of pollution control measures in the plants. Some of these are mentioned below:

- Installation of selective catalytic reduction unit in nitric acid plant for degradation of nitrous gases into harmless gaseous nitrogen.
- Replacement of conventional effluent treatment with microbiological degradation of effluent into harmless products and reuse of treated water.
- Deep hydrolysis system in urea plant for conversion of its waste effluent into useful boiler feed water.
- Installation of condensate stripper in ammonia plant for stripping of its components and recycle of the same.
- Installation of ventury scrubber in Suphala plant for thorough scrubbing of dust being released into atmosphere. The solution is recycled to the process for conservation of its costly raw material thereby improving its nutrient efficiency.
- Installation of de-dusting system in urea plant for scrubbing of urea dust being released from prilling tower. At the time of its installation, it was first of its kind in the country.
- Installation of new stack in sulphuric acid plant for better dispersion of emission. This combined with conversion of technology of sulphuric acid production to double catalyst double

absorption type has reduced pollution levels from the plant substantially.

- Almost all the plants of the Trombay Unit have been replaced with modern technology plants for control of environmental emissions thereby protection of environment.

All these measures have improved the overall productivity of the plants as the plants are now new generation plants.

The company has changed production methods in some of the plants along with the change in technology. This has substantially reduced the cost of production, and has given long term enhanced productivity along with cleaner environment. Ammonia production was earlier was based on partial oxidation method, which was based on older technology. This method was changed while revamping of the plant to steam reforming system. Methanol production method was also changed from conventional process to steam reforming process. A new urea plant was installed in the Trombay unit with entirely different production method. All these changes in the methods of production have given the long term benefits in the terms of profitability.

The company has established research and development departments for both agricultural and chemical researches. These departments have developed various products which directly and indirectly help in betterment of environment. Agricultural research has developed some of the products which help in effective utilisation of the existing fertilisers. Chemical research has developed some processes for utilisation of by products by value addition to them. They have also developed new techniques for biodegradation of effluent in a cheaper way which in advance stages of pilot scale experimentation.

Environmental risk assessment study have been carried out for all the plants of RCF. An integrated risk mitigation programme has been formulated to cover the factory as a whole. A thorough Emergency Preparedness Plan which is based on the following lines

- ▶ **Information Dissemination**
- ▶ **Fire Fighting and Rescue Operation**
- ▶ **Environmental Monitoring**
- ▶ **Safety Audit & Follow up**
- ▶ **Tackling Disasters (Unit level)**
- ▶ **Safety Committees**
- ▶ **Liaison**

## **8.0 INITIATIVES TO PROMOTE GREATER ENVIRONMENTAL RESPONSIBILITY**

### **RCF'S SHE POLICY:**

RCF, firmly believes in that all accidents are preventable and management of occupational safety, health and environment is an important tool to achieve productivity and to avoid national loss.

The safety of all employees, customers, and neighbouring community is paramount to achieve and maintain reasonably high standards of safety and health of employees, plants, machines, and environment community at large.

### **Environment Management Structure**

At RCF, Trombay, the Environment Cell was formed as early as 1978 and at Thal, since inception in 1984-85. Since then a full-fledged Environment Department is functioning as a nodal agency for handling all matters relating to environment. This department is independently under the charge of Chief Engineer.

### **Environmental Training Programme**

The Company has a Training Institute where all levels of employees are regularly trained in functional as well as cross-functional areas of responsibility. The yearly training calendar is prepared by Training Centre in consultation with the Operation Manager of each plant.

Understanding the Environment Management function and the need for environment protection are some of the topics integrated into the induction training programme as well as development programme for

officers and workers of all disciplines. The training records are maintained at Training Centre. A feed back system also exists to validate the effectiveness of the Training programme.

### **Environment Auditing Programme**

There is no formal Environment Audit System. However we carry out an Environment Audit along with the Technical Audit of each process plant (once in two years). The environmental audit report forms a part of the Technical Audit report of respective plants. Over and above, Company regularly submits an Environment Statement each year to MPCB and MOEF.

### **INSPECTION**

**Internal** - Daily inspection of various pollution control equipments are carried out by personnel from Technical Services Dept. or Environment Cell. Any minor deviations observed are reported verbally to O.M. or HOD's. However if any major deviation is observed, then, we follow a system of immediate issue of an environment infringement memo to O.M. Depending upon the severity of the infringement, an yellow card or red card is issued. Records of such memos issued and actions advised are maintained.

**External** - For continual improvement of Environment, our management has constituted an yearly 'Rajiv Gandhi Environmental Award' - a Rolling Trophy and Cash Award. The Rajiv Gandhi Environment Award committee is constituted of senior managers & worker's representative. An exhaustive checklist is provided to the committee members for evaluating each plant. The plants at Trombay Unit are evaluated by the Thal committee members and vice versa.

## **Environmental Management Strategy**

Types, Sources of pollution and the available Control/Treatment facility

### **GASEOUS EMISSIONS**

Major gaseous and particulate emissions are from the various processes through their stacks. There are in all 34 stacks identified in "Consent order". The parameters being monitored are Nox, SO<sub>2</sub>, NH<sub>3</sub>, F and dust. Environment parameters monitoring system is already in place. On an average all analysis results are well within the statutory limits.

The various built in stack emission control equipments are listed below pollutant wise -

#### **i) Control of emission of oxides of sulphur**

The Sulphuric Acid Plant commissioned in 1965 was originally based of the single conversion single absorption technology. In 1977, RCF adopted the double conversion double absorption technology with considerable reduction in emission of SO<sub>2</sub>.

The acid mist levels are brought within limit by installing Brink Mist Eliminators.

A start up scrubber is installed to keep the SO<sub>2</sub> emission to minimum during start-ups.

#### **ii) Control of emissions of oxides of Nitrogen**

- Selective catalytic reduction reactors are installed High Pressure Nitric Acid Plant to control the Nox emissions.



- Selective catalytic reduction reactors are installed in Medium Pressure Nitric Acid Plant to control the NO<sub>x</sub> emissions (NO<sub>2</sub> was totally removed).
- Addition of urea in reactors of Suphala & ANP Plants will control the NO<sub>x</sub> emissions through vent stack.

### **iii) Control of emission of Ammonia**

- Process condensate strippers in Ammonia Plant will prevent ammonia losses through process condensate.
- Waste Water Treatment Section in Urea Plant.
- Hydrolyser Section in Urea Plant.
- Purge Gas Recovery Unit in Ammonia Plant.
- Scrubbers in Suphala Plant & ANP Plants.

### **iv) Control of emission of suspended particulate matter**

- High efficiency venturi scrubbers in Suphala Plant.
- Cyclone separators in ANP to reduce product dust.
- Dedusting system is integrated with the prilling tower to keep the urea dust within limit.
- Bag filters and cyclone separators are provided in grinding mills of ANP & PAP.
- The maintenance of these pollution control equipments is normally undertaken along with the annual turnaround of the respective plant. However, if any deviation is noticed in stack analysis, an action plan is initiated to attend the respective control equipment.
- A fugitive emission monitoring system exists. Based on monitoring results, specific action plans are prepared to identify the causes for any deviations and job plans for minimising fugitive emission.

## **WASTE WATER**

- Effluents are generated in varying quantities on a continuous basis in each of the plants. They are first collected in a dedicated effluent pit attached to each plant. From there, the effluents are pumped to Central Effluent Treatment Plant.
- The “Consent Order” stipulates the quantity and quality of final trade effluents to be discharged from outlet of ETP. As such no trade effluent enters any other water streams.
- The quantity & quality stipulation of final treated water is being met with 95 % occasions.
- Approx. 40 % of the total treated effluent water daily is recycled and reused for afforestation; scrubbing in CNA Plant, and gypsum solution preparation in PAP.

## **DRAINAGES NETWORK**

The factory drainage has a separate network of storm water drains, which finally is discharged into the North nallah. The storm water drains and effluent network are not interconnected. The canteen effluents are going to the storm drain, which leads to west nallah. No specific analysis of these effluents have been carried out. The storm water drain is also analysed occasionally for pollutants to ensure that the parameters such as pH, AN, NN are within MPCB limits.

## **ETP SYSTEM**

- The Effluent Treatment Plant was originally installed in 1978 with the prime objective of chemical neutralization of phosphates, fluorides, SS & pH present in complex fertilizer effluents. However, with the

stringent conditions imposed under Minimal Industrial Standards (MINAS), our Company has gone for a further expansion of ETP in 1993 by adding stripper, nitrifications reactor and denitrification reactor. The treatment route involves.

- Removal of suspended solids from the combined effluents of nitrophosphate group of plants by a thickener.
  - Lime treatment for precipitation of flourides and phosphates and clariflocculation for removal of precipitates.
  - pH correction with caustic and partial air stripping of combined Ammonical effluents of Nitrophosphate Group of Plants, Ammonia & Urea Plant.
  - Biological nitrification for conversion of ammonical nitrogen to nitrate nitrogen.
  - Biological denitrification for conversion of nitrate nitrogen to N<sub>2</sub> into gas of combined effluents from the nitrification stages and also effluents from Nitric Acid Group of Plants.
  - pH correction followed by surface aeration for bringing up Dissolved Oxygen to desired levels in treated effluents.
  - The ETP Plant has been provided with standby clarifloculator for retention of effluents and Sludge drying beds for chemical sludges and biological sludges.

## **NOISE CONTROL**

Environment cell are monitoring sound levels inside the control rooms and near noise generating equipment regularly once in a month and/or as and when required. Also ambient sound levels are monitored around the factory. Environment cell is having all the records since 1994. One copy of the result is sent to Operations Manager of respective plant for necessary action. With the help of

these results, appropriate action plans are initiated to reduce the sound levels.

## **ENVIRONMENT PARAMETER MONITORING PROGRAMME AT RCF**

### **GASEOUS EMISSION**

There are three levels of monitoring being carried out.

#### **A) Ambient Air Monitoring**

There are three fixed ambient air monitors installed at three strategic locations (decided in consulting with statutory authorities). They will monitor continuously the parameters such as NH<sub>3</sub>, Nox, SO<sub>2</sub>, SPM and meteorological parameters. The continuously monitored data are logged and average hourly values are being transferred and stored continuously in a centralised computer data bank located in Technical Building. A fourth ambient air station is also being installed and is to be located at Administrative Building.

High volume samplers are also used for monitoring ambient air quality at specified locations on need basis.

#### **B) Stack Monitoring**

The critical environment parameters to be monitored in stacks are NH<sub>3</sub>, Nox, SO<sub>2</sub> and SPM. Continuous on line monitors are installed for monitoring Nox & SO<sub>2</sub> in the stack of Nitric Acid Plants (Old & New) and Sulphuric Acid Plant. Data are being continuously displayed on the control panels of above plants and records also maintained. The stack emission levels from all other critical process plant stacks are being monitored by central chemical laboratories based on a pre-programmed monthly schedule. Analysis is carried

out at C.C. Lab as per laid down procedures by statutory authorities (or National/International standards).

### **C) Work place Monitoring**

Parameters such as NH<sub>3</sub>, Nox, SO<sub>2</sub>, HC are being measured periodically at pre-identified critical work places by Safety Department using “Drager Tubes”. The monitored data are also recorded. Over and above, on line work place monitors (for Nox, HC, CO, NH<sub>3</sub>) are also installed at prioritised work locations.

Ambient noise level at work place is monitored monthly using a sound level meter manufactured by Bruel & Kjaer. Sound level data are recorded.

## **LIQUID EFFLUENTS**

Liquid effluents generated in each process plant is collected in dedicated effluent pits (attached with each plant). The effluents are being continuously pumped to Centralised Effluent Treatment Plant for treatment before disposal to creek.

The contaminants generally present in the liquid effluents are Phosphates, Fluorides, Ammonia, Ammonical Nitrogen, Nitrate Nitrogen, TKN, TDS, COD and BOD suspended solids and pH.

All the above mentioned parameters of liquid effluent are analysed for each type of effluent based on it's characterisation. Analysis of effluent pit samples are being carried out by the Central Chemical Laboratories once every alternate day. Analysis of final discharged water from ETP to North Nallah are being analysed once every alternate day by C.C. Lab. There is a nallah on the west side of factory which originates from colony outside the factory and flows through

the factory to the B/L from where it ends up in sea creek. Samples of the west nallah water is also analysed for any contaminants and records are maintained by Environment Cell.

### **Calibration of Monitoring Equipments**

Continuous on line NH<sub>3</sub>, Nox, SO<sub>2</sub>, SPM analysis located in each of the Ambient Air Monitoring Station are calibrated once in a month using “Dynamic Calibrators” and standard calibration Gases. Records are maintained at each Ambient Station log book.

Continuous on line Nox & SO<sub>2</sub> stack monitoring analysis are calibrated once in a month (or need basis) using in built calibrators and standard calibration gases. Records are maintained in logbook at respective station.

### **Laboratory Services**

RCF has a full fledged Central Chemical Laboratory at both the units, at Thal as well as at Trombay which are provided with all state of the art equipments which are needed to carry out analysis of all the identified environmental parameters. Our laboratories are “Approved Laboratory” by CPCB. The C.C. Lab. also provides “Quality Control” analytical services to all various plant. The laboratory can carry out analysis relating to raw material, intermediates and final products quality.

### **DOCUMENTATION**

All the various monitoring data, which are, generated daily, weekly or monthly are being documented in report formats. They are appropriately numbered and filed in designated files.

## Monitoring Records - Their retention & Distribution

At present there are no set guidelines as to how long the monitoring records shall be retained -

The ambient air monitoring data are being compiled into report format and the report is send every month to CPCB, MPCB & BMC.

The stack monitoring data of Critical Stacks are tabulated in a desired report format and send monthly to CPCB & MPCB.

The stacks monitoring data are also being send to respective plants by CCL. Master copy is retained in Environment Cell.

Liquid effluent analysis report of each plant is distributed to the respective plants by C.C.Lab. Master copy is retained in Environment

The final treated effluent from ETP are being analysed by CCL every alternate day. Copy is retained in Environment Cell.

An Environment Deviation Report is generated weekly by the Environment Cell indicating the major deviations in gas emission/liquid effluents and reasons thereof. This report is circulated to General Managers and respective Dy. G.M.'s and O.M.'s.

## **SPECIAL EFFORTS FOR ENVIRONMENT MANAGEMENT**

### **Protection of Environment**

This subject has been viewed as one of the most important functions in the organisation. RCF has an Environmental Management & Pollution Control cell which is headed by a senior officer who is assisted by a group of engineers who have got varied experience in the operation of plants and pollution control activities. This department

keeps a track of efficient performance of various pollution control measures incorporated in the factory and informs the management and also statutory bodies like Maharashtra Pollution Control Board, Central Pollution Control Board, Bombay Municipal Corporation etc. about the actual emission levels from the factory and also the progress of various activities on pollution control measures under implementation within the factory.

RCF has already implemented Environmental Management System and achieved ISO 14000 Certification for its both the units.

RCF has set up 5 MGD Sewage Treatment Plant to recover 3.0 MGD pure water from municipal sewage with a view to meet part of the process water needs of the operating plants and also to overcome occasional water cuts being imposed by BMC from time to time due to power cuts, scheduled or unscheduled maintenance of supply pipelines. Apart from meeting part of RCF's process water requirements, Sewage Treatment Plant will also help BMC to achieve following social objectives:

- Making available of approximately 3.0 Million Gallons per day of fresh water to citizens of Mumbai.
- Helping in reducing the Sewage Treatment Cost which otherwise would have been incurred by BMC to comply with current environment regulation.

### **Greening of the Environment:**

As a policy, RCF had always made efforts to excel in their Commitment for Greening of Environment. In this endeavor, we have perused many schemes with vigour, in Mumbai and Navi



Mumbai area. Below is given details of tasks performed by RCF's Horticulture Department in Greening of the Environment.

### **Chembur Green Project**

Chembur Green Project was launched by RCF in the year 1975. The main aim of this project is to keep the city and surrounding areas with a clean environment by way of beautification and tree plantation. Activities regarding the said project are still continuing. The objective of the project are as follows:

- Raising and multiplication of tree saplings in nurseries and tissue culture laboratory.
- Distribution of tree saplings to schools, colleges, charitable organizations, housing societies in and around Bombay and New Bombay.
- Technical guidance to common men about tree plantation activity, kitchen gardening, nursery etc.
- Rendering services to Academic Institutes on garden development, supply of red earth, manure, fertilizer sweeping, free of cost.
- Lecture and demonstration on gardening and tree plantation, to house wives and school teachers.

Based on the above objectives RCF's Horticulture Department have carried out the following activities.

- About 70,000 tree saplings have been prepared in our nursery and distributed to various schools, colleges, charitable organizations in and around Bombay and New Bombay.
- Multiplication and mass propagation of quality tree saplings through our nurseries and well equipped tissue culture laboratory

have been taken up and about One Hundred Thousand tree saplings have been raised.

- Number of Workshops have been conducted on kitchen gardening, tree plantation and about One Thousand ladies have participated in this workshop.
- RCF has provided, soil, manures and tree samplings to various schools for tree plantation activity and also for different residential societies in Mumbai.

### **Green Belt Development**

In our RCF premises, about 76 acres of land has been brought under lawn and gardens, out of which 18 acres lies inside factory premises at different plants and 58 acres in different parts of township & adjacent area. Behind Effluent Treatment Plant, in low laying area a belt of 25 acres of land approx. is grown with paragrass which remains green through out the year. The tree plantation area includes various kinds of trees species viz. Accasia, Gulmohor, Ecuylptus, Ashoka Tall, Ashoka round, Peltaphorum and Cassia and fruit plants like Mango, Coconut, Jackfruit and Cashewnut etc.

### **Afforestation Activity**

RCF Mumbai Unit is established on an area of 750 acres which comprises factory area (500 acres) and township and surrounding area (250 acres). The afforestation activity taken in RCF premises during the last 7 years is given below:

### **Traffic Island**

We have developed and are maintaining Traffic Islands on Bombay-Poona Highway at RCF Circle Panjrapol, Chembur. Many rare

botanical species have been introduced this year. A glass house with rare indoor plants and a beautiful water pond have been set up.

## **9.0 ENCOURAGING DEVELOPMENT AND DIFFUSION OF ENVIRONMENTALLY FRIENDLY TECHNOLOGIES**

RCF has been encouraging the development and diffusion of environmentally friendly technology. It has been a long term challenge for the company which has drawn the management and research capabilities of the company.

### **IN-BUILT POLLUTION CONTROL SCHEMES**

#### **MONITORING**

##### **Three Tiers computerised monitoring**

- **Stack emission**
- **Ambient Air Quality**
- **Work place**

The operating plants of the company were of old technology. As the time passed the technology improved. RCF adopted all the changes of the modern technology to maintain a pace with the environmentally friendly processes and technological improvements over the older generation plants. Being amidst of the population, the company always has given prime importance to all the issues related to clean environment. All the measures were taken to protect and rather improve the environmental conditions existing. Monitoring has been enhanced. The company has revamped all the production facilities and the plants are based on state of the art and environmentally sound technology.

## **MEASURES TAKEN BY RCF IN THE FIELD OF ENVIRONMENT**

### **Revamping of ammonia plant with latest generation plant**

Ammonia plant at Trombay unit of the company was old generation plant. this plant was old generation plant ( year 1964 ) which was consuming high energy as well as was creating pollution. The plant had two sections. Both these sections were replaced with new generation technologies which are latest and environmentally friendly technologies.

### **Stoppage of old generation urea plant and establishment of new urea plant**

Old generation urea plant of the company has been stopped for the reasons of possible risks to environment in future. The company installed the latest urea plant and the old plant was stopped.

### **Revamping of HP nitric acid plant**

Revamping of old generation nitric acid plant has been done by the company in two phases. Old absorption towers have been replaced in phase-I with efficient new generation absorption towers thereby eliminating pollution. In phase-II, the front end of the plant was revamped with latest generation unit, which has resulted in savings in energy consumption as well as reduction in pollution.

### **Revamping of Complex Fertilizer plant**

The company has revamped its old generation complex fertilizer N:P:K::15:15:15 plant with a latest technology plant. By this, the

company has implemented its commitment towards clean environment.

### **Revamping of sulphuric acid plant**

The sulphuric acid plant was old generation plant. This plant has been revamped into the upgraded technology plant. This has eliminated the risks of emissions of the pollutants from the plant in future.

## **IN-BUILT POLLUTION CONTROL MEASURES IN THE PLANTS**

The company believes that the best way of pollution control is the control at the source itself. With this philosophy the company has installed several in-built measures for pollution control and to bring the cleaner environmental approach into practice. Some of these measures are:

### **Ammonia Plant**

The plant has adopted the recycle of waste water to reduce the load on the treatment of effluent generated from the plant. this has resulted in savings of energy and elimination of pollution at source.

### **Urea Plant**

The plant is latest generation plant. This has adopted total recycle of water from the plant. as a result, the effluent generation from the plant has reduced to nil. This as a result, has reduced load on effluent treatment system.

## **Complex Fertilizers**

With the upgradation of technology, the emission levels from the plant had been brought down to minimum. To further reduce these, the plant has installed ventury scrubbers to scrub any dust going to atmosphere. The water from the scrubbers is recycled back into the system.

## **Nitric / Sulphuric Acid**

Selective catalytic reduction units has been installed in the nitric acid plant to convert the gaseous emission of nitrous oxides in to nitrogen gas, which is harmless to the atmosphere. Double catalyst and double absorption technology in the sulphuric acid plant has made the plant and the environment clean.

## **Methods to Promote the Use and Diffusion of Environmentally Sound Technologies (ESTs)**

RCF has recognised the need for revamping of its old plants by introduction of latest available cleaner technology plants. This has benefited not only the environment but has also improved conservation of its precious resources, thereby enhancing the profitability. The company intends to update the technology of some of the plants which were considered to be the latest generation plants a few years ago. One of its ammonia plants is being revamped for conservation of energy. This step would also bring down the levels of emissions from the plant.

RCF strongly believes and practices the philosophy that the best way of pollution control and protection of environment is controlling

pollution at source rather than generating it and subsequently treating it. RCF has also followed the concept of zero effluent in some of the plants, namely urea and ammonia plants and generation of minimal effluent where zero effluent is not possible for consideration of huge cost involved in processing. Since inception of the plants, all the effluent generated from various plants is treated in exclusive Effluent Treatment Plant with state of the art technology of microbial degradation of effluent in environmentally friendly gases like nitrogen gas and clean and acceptable effluent. RCF has always been trying to minimise effluent generation from various plants by way of improvement in technology which generate less effluent as well as recycle of effluent in the process itself. Some of the plants which have been revamped on the above consideration are:

- Ammonia plant at Thal
- Urea plant at Thal
- Suphala plant
- ANP Plant
- Ammonia-I Plant at Trombay

RCF has incorporated various techniques in all the plants to bring down pollution levels and to implement cleaner technology. In all the major plants, thorough technological upgradation has been carried out. Our research and development as well outsourcing in this field had proposed changes in Effluent Treatment Plant, which have been incorporated. The in-house R&D has arrived at better solution of treatment of effluents at lower and more efficient way which will be implemented soon.



The company as a whole has improved all its plants and environment in general. Both the units of the company, namely, Trombay and Thal are certified as ISO 140001.

RCF's old ammonia plant was designed for using furnace oil or Low Sulphur High Stock fuel as feed stock, has changed its old ammonia plant, which used to generate higher amount of wastes. The technology was changed to use associated gas, which is a clean technology with respect to emissions.

RCF produces various by-products, which are used as industrial products, these are – Gypsum, Chalk, Ammonium Nitrate, Argon, Sodium sulphite etc. RCF also recovers waste from its effluent treatment plant and sewage treatment plant. Some of the waste is used in the production process itself. The other waste material from sewage treatment plant is highly effective manure and is readily used for purposes of agriculture or in horticulture.

RCF is committed to environment protection and clean technology. The company has well laid policy called Environmental Policy which is displayed at various locations in the plants as well as all the offices of the company. The company is certified as ISO 14001 company as mentioned earlier. The environmental policy of the company is well laid

### **ENVIRONMENTAL POLICY**

**We, Rashtriya chemicals & fertilizers limited, a leading public sector undertaking of government of India manufacturing fertilizers & chemicals, commit ourselves to minimize the adverse impacts of our operations and products on environment.**

**We are committed to comply with the relevant legislation and prevention of pollution. We shall strive to effectively prevention of pollution.**

**We shall strive to effectively maintain our environment management system and achieve excellence in environmental performance.**

**We are committed to continually improve our environmental performance through: adoption of preventive strategies to reduce the generation of fugitive & stack emissions, effluents and solid waste optimizing usage of energy, steam, water and chemicals with emphasis on recycle and reuse in our operations organizing appropriate training for our employees to develop a prevention-oriented work culture and reducing their exposure to noise and emissions to a practicable minimum for their better health effectively plan on-site and off-site crisis situations and encourage our vendors and contractors to be environmentally responsible.**

(S/D)

**CHAIRMAN & MANAGING DIRECTOR  
RASHTRIAY CHEMICALS & FERTILIZERS LTD.**

Our Environment Management System (EMS) spells elaborately on communication, which is as under:

The ISO 14001 EMS Standard requires that we implement a formal communication covering –

1. Internal communication between various levels and functions of your plant / facility; the emphasis is to promote cross-functional

- communication for effective information sharing (sharing right information at the right time to the right person).
2. The Standard demands the EMS to have a proactive communication system with the external interested parties. It stresses registration of all relevant communication made to or obtained from external interested parties.

The communication includes the following:

- ▶ What all are the possible risks related to the chemicals we use,
- ▶ What are their hazardous physical and chemical characteristics
- ▶ What are their roles and
- ▶ What are the steps that should be followed in case of any emergency, like, any explosion or accidental failure of storage tanks or tankers, etc.
- ▶ To share information proactively to the external stakeholders regarding the significant environmental aspects associated with our activities / products and services, even under emergency and abnormal operating conditions, and also our targets etc.

Design for sustainability has been key issue for revamping and modernisation of RCF's plant as we are located in the city area where environmental norms are very stringent. Due to the above the company has to constantly update its plants and facilities and remove the redundant and old generation plants and the facilities. To ensure long term sustainability, some of our crucial facilities like ammonia import and storage facility and ammonia storage facilities were scraped which had huge financial implications. In-house research and development as well as those suggested by our original technology suppliers based on their world-wide experience is incorporated based on the latest developed technologies.

Life cycle assessment is carried out at the time of installation of new facilities. However, as per our past experience, all the plants were revamped much earlier to reaching a stage of end of life period.

Environmental Technology Assessment is a mandatory exercise for installation of any new facility which may affect environment. A detailed Initial Environmental Impact Assessment is carried out before putting up a proposal for installation of any new facility for obtaining environmental permit to operate the facility. This is followed by Detailed EIA which takes into account various studies conducted for analytical study of possible impact of the new facility on the environmental aspects. The ministry of forests and environment (MOEF) grants permission to install a facility based on Detailed EIA. Consent of local Pollution Control Boards is also required for installation and operation of a production facility. Time bound as well as surprise audits are carried out by state and central government agencies on pollution control and the permit to operate is based on their clearances. The company has its own elaborate system of monitoring environment. Various modern analytical tools are used like dispersion modelling, Rapid Hazard assessment techniques, Recent modelling and mathematical techniques to determine damage distances, Reliability analysis, Use of site specific information (e.g. meteorological data), Population distribution and movement pattern etc, are carried out regularly to ascertain the protection of environment and preparedness of the company towards its commitment.

RCF is committed to protection of environment and the same is expected from our contractors and vendors also follow the same. This is spelt out clearly in our environmental policy.

## **10.0 ANTI-CORRUPTION: WORKING AGAINST ALL FORMS OF CORRUPTION, INCLUDING EXTORTION AND BRIBERY.**

Rashtriya Chemicals & Fertilizers Limited is a Public Sector Undertaking Company with Government of India as 92.5% shareholder. Being owned by the government, it has to follow all the legal requirements and principles applicable in the Country as the minimum. The Company has used its autonomy vested with the Board of Directors of the Company and expanded its goals and objectives aligning with the anti-corruption issues since inception of the Company. Compliance of legal principles and guidelines is regularly being followed. These are also being monitored by the Company as well as by various government agencies.

Rashtriya Chemicals & Fertilizers Ltd. promotes the rule of law. In all the dealings with the suppliers and other traders, the issues pertaining to promoting and preserving the rule of the law are ensured. The Company has made observance of transparency mandatory as a part of prequalification and execution of contracts related to the supplies or the services required for the performance of the business. The Company has made provisions to ensure that transparency in Company's dealing is not violated by the employees of the company and the contractors with whom the company is dealing. As corruption can find routes more easily through various tenders, the Company has formulated well structured Tender Guidelines and made it mandatory to follow for all contracts pertaining to purchases, works & services and disposals.

Our company being a government company, transparency in our dealings is continuously monitored by various in-house and

statutory agencies. The company has a full fledged Internal Audit Department. This department ensures that the systems and procedures are in place and are complied with. Any deviations with respect to these are promptly brought to the notice of higher management who in turn, takes timely action to rectify any loose ends. Company's working is monitored by Government Audit, who in turn reports to Comptroller and Auditor General (CAG) of India, which is an autonomous body and reports directly to the President of India. CAG has deputed full time resident auditors within the company who monitor Company's working round the year.

Being a Government of India Company, we are bound by directives of Central Vigilance Commission (CVC), which is also an autonomous body, directly reporting to the President of India. The CVC has posted full fledged Chief Vigilance Officer in the rank of functional director of the Company for reviewing the working of the company for ensuring that the company maintains transparency in its dealings and follows all the anti-corruption measures. Chief Vigilance Officer participates in the Boards meeting, whenever required, so that any issues of sensitive nature can be brought immediately to the notice of the Board of the Company.

Our company takes pride in ranking high in the Probity Perception Index, which is 9 out of 10 within our Country amongst Government organisations, and is considered very high ensuring a "transparent and rule following organisation".