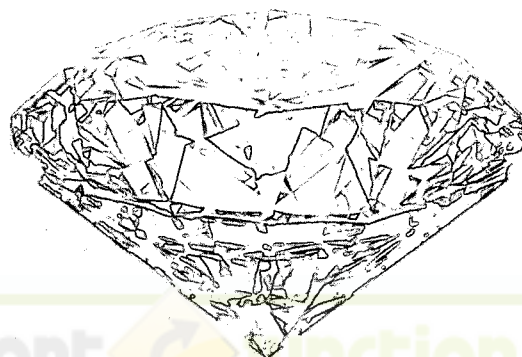




## A JEWEL FOR THE CROWN



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MRPL ... NOW A  
MINI RATNA COMPANY

19th Annual Report 2006-2007

**Mangalore Refinery and Petrochemicals Ltd.**

(A Subsidiary of Oil And Natural Gas Corporation Limited)

# Mangalore Refinery and Petrochemicals Limited

## 19th Annual Report



### BOARD OF DIRECTORS

Shri R. S. Sharma

Shri R. Rajamani

Shri L. K. Gupta

Dr. A.K. Balyan

Shri N. K. Mitra

Shri Prabh Das

Shri V. P. Joy

Shri V.K. Dewangan

Shri S. Roy Choudhury

Shri G. M. Ramamurthy

Chairman

Managing Director

Director (Finance)

Director

Director

Government Director (Upto 8<sup>th</sup> January, 2007)

Government Director (Upto 1<sup>st</sup> August, 2007)

Government Director (From 10<sup>th</sup> March, 2007)

Director

Director (Nominee of IDBI Bank Ltd.)

### COMPANY SECRETARY

Shri B. Sukumar

### AUDITORS

M/s. Varma & Varma, Chartered Accountants

### REGISTERED OFFICE AND REFINERY SITE

Mudapadav, Kuthethoor, P.O. Via Katipalla,

Mangalore - 575 030, Karnataka

Tel. No.: 0824-2270400

Website: www.mrpl.co.in

### SOLICITORS

M/s. Mulla & Mulla & Craigie Blunt & Caroe

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### BANKERS

State Bank of India,  
Canara Bank,  
Punjab National Bank,  
Bank of Baroda,  
Corporation Bank,  
United Bank of India,  
Citibank N.A.

### INVESTOR RELATIONS CELL

Maker Tower, 'F' wing, 10<sup>th</sup> Floor,  
Cuffe Parade, Mumbai - 400 005.  
E-mail : investor@mrplindia.com  
Tel.: 022-2217 3000, Fax : 022-2217 3233

### REGISTRAR AND TRANSFER AGENTS

MCS Limited,  
Harmony  
1<sup>st</sup> Floor, Sector - 1, Khanda Colony,  
New Panvel (West), Dist : Raigad,  
Maharashtra, Pin - 410 206  
Tel. No.: 022-2749 2003 - 10  
E-mail: mcspanvel@yahoo.co.in



## DIRECTORS' REPORT FOR THE FINANCIAL YEAR 2006-07

Dear Members,

Your Directors are pleased to present the 19<sup>th</sup> Annual Report of the Company, together with the audited accounts for the financial year ended 31<sup>st</sup> March, 2007.

It is a matter of immense satisfaction that operational performance of the Company has reached new heights of excellence during the year under review:

- Highest-ever capacity utilization of 129% (up 4% from 125%) which is also the highest among all Indian refineries.
- Highest ever refinery crude thruput at 12.54 MMT (up 3% from 12.12 MMT)
- Lowest Specific Energy Consumption at 63.13 MBTU/BBL/NRGF.
- Refinery crossed 1208 days of accident free operation, as on 31.03.2007.

### 1. MRPL, NOW A MINIRATNA

You would be glad to know that your Company has been conferred the status of 'Mini Ratna' (Category - I) by Ministry of Petroleum & Natural Gas, Government of India, vide their letter dated 15th June, 2007.

#### 1.1 FINANCIAL PERFORMANCE

	(Rs. in Crore)	
	Year ended 31st March, 2007	Year ended 31st March, 2006
Turnover	32,376.88	28,242.86
Profit before Depreciation Interest and Tax	1658.34	1,190.89
Interest and Finance Charges	214.53	187.77
Gross Profit/(Loss) after interest but before Depreciation and Tax	1443.81	1,003.12
Depreciation and Amortisations	354.86	380.54
Provision for Wealth Tax	0.14	0.09
Current Tax and Fringe Benefit Tax	72.35	35.77
Previous Year's Tax/ Interest	29.12	-
Deferred Tax	461.82	215.11
<b>Profit after Tax</b>	<b>525.52</b>	<b>371.61</b>
Balance of Profit/(Loss) brought forward from previous year	284.48	52.78
<b>Surplus available for appropriation</b>	<b>810.00</b>	<b>424.39</b>

#### Appropriations:

Proposed dividend on 0.01% Preference Shares (Rs. 9,186)	0.00	0.00
Proposed Dividend on Equity Shares (8%)	140.23	122.70
Tax on Dividend	23.83	17.21
Balance carried to Balance Sheet	645.94	284.48
<b>Total</b>	<b>810.00</b>	<b>424.39</b>

- 1.1.1 Your Company has achieved a turnover of Rs. 32,377 Crore (up 15% from Rs. 28,243 Crore), earning a net profit of Rs. 525 Crore (up 41% from Rs. 372 Crore).

#### 1.2 DIVIDEND

The Board of the Company has decided to recommend higher dividend of 8% (previous year 7%) which will absorb Rs.140.23 Crore excluding Rs.23.84 Crore as tax on dividend. In respect substantial improved financial performance, the Board has decided only a marginal hike in dividend payout keeping in view the large

requirement of funds for the ongoing Refinery Upgradation and Expansion Project, involving capital expenditure of approx. of Rs. 8000 Crore.

#### 1.3 OPERATIONAL PERFORMANCE

During the financial year 2006-07, the refinery processed a record thruput of 12.54 million metric tonne (MMT) crude oil achieving 129% capacity utilisation (up 3% from 12.12 MMT). It produced 11.72 MMT of finished products (up 3% from 11.34 MMT).

#### 1.4 EXPORTS

The exports of petroleum products (Motor Spirit, Mixed Xylene, Naphtha, HSD, ATF, VGO and FO) during the year amounted to Rs.11,615 Crore against Rs.11,921 Crore the previous year, which is about 47% (previous year 51%) of the total dispatches of 11.44 MMT.

#### 1.5 MARKETING

- 1.5.1 Your Company continues to show excellent growth in its direct marketing sales during the year which were at Rs. 1,908 Crore (up 35% from Rs.1,411 Crore). Production of Crumb Rubber Modified Bitumen (CRMB) which improves the life and quality of the roads was started. As informed in the last report, the Long Term Contracts were signed with State Trading Corporation, Mauritius and Emirates National Oil Company, Dubai (ENOC) for export of petroleum products for a year aggregating approximately 1.5 Million Metric Tones. In July, 2007, your Company has signed a term contract with State Trading Corporation, Mauritius to supply One Million Metric Tonnes of Petroleum products per annum for a period of 3 years effective August, 2007. The Term contract with ENOC has also been extended for a period of one year.

- 1.5.2 ONGC and HPCL have entered into a MOU for Product Sale-Purchase and providing for infrastructure services and co-operation in energy and related field for a period of 4 years. This will facilitate greater evacuation and marketing of MRPL products by HPCL in domestic markets. Further, HPCL would extend hospitality arrangements to MRPL of its terminal and infrastructure facilities. This understanding will help MRPL to source products for its proposed Retail Outlets from nearby HPCL terminal's. MRPL has already started using HPCL's facilities at Managalore, Hassan & Dewangunti (Bangalore) terminals for sales of products to its direct customers.

- 1.5.3 Your Company is cautiously proceeding with the setting up of Retail Outlets and expects about 15 Retail Outlets to be commissioned by the end of the current financial year. Approval of Ministry of Petroleum and Natural Gas has been obtained for marketing ATF. Your Company has been registered with Airtort Authority of India for such activity. Orders have already been placed for the construction of ATF refuellers. The delivery of these refuellers is expected in August-September 2007.

- 1.5.4 In addition, your company has also commenced production of Value-added Product Mixed Xylene in December, 2006. The first parcel of export of Mixed Xylene was shipped on 25<sup>th</sup> January 2007 to M/s. Itochu Corporation.

#### 2. AWARDS AND RECOGNITIONS

The following awards/ recognitions were received during the year:

- 1) 1<sup>st</sup> prize in Jawaharlal Nehru Centenary Award for Energy Conservation, by Centre for High Technology, for the year 2006-07, for the Fourth Year in succession.



- 2) Award for Best Exporter though NMPT (New Mangalore Port Trust) from the federation of Karnataka Chamber of Commerce & Industry for the year 2006-07.
- 3) 'Unnatha Suraksha Puraskar' of National Safety Council – Karnataka Chapter for the year 2005, for Outstanding Safety Performance and Management System for Petroleum and Petrochemicals Category.
- 4) Best Safety Industry with Best Safety performance award under the category of Large Industry Division for the year 2006 from Department of Factories and Boilers, Government of Karnataka.
- 5) Best Boiler Performance award under the category of power boiler for the year 2005-06 from Department of Factories and Boilers, Government of Karnataka.
- 6) State Award for Excellence in Export in overall category from Government of Karnataka for the Financial year 2004-05.
- 7) Business Excellence Award for 2006 from Karnataka Chamber of Commerce.
- 8) Commendation Certificate for Large Scale Manufacturing Industry under Rajiv Gandhi National Quality Award – 2006.
- 9) Revised accreditation for ISO 9001:2000 Quality Management System including Marketing and Bunker Supply Facility.
- 10) 2<sup>nd</sup> prize in Oil Industry Safety Award 2006-07 by Oil Industry Safety Directorate.

### 3. IMPROVED CREDIT PROFILE

- CRISIL has assigned to your Company a corporate credit rating "CCR AAA" (pronounced as CCR Triple A) indicating highest degree of strength with regard to honoring debt obligations by the company during the year.
- ICRA has also assigned to your Company an Issuer Rating of "IR AAA" (pronounced as IR Triple A) indicating that the company carries the lowest credit risk.
- Your Company has been ranked **Fifth** among India's top 500 companies in terms of total income in the oil refining and marketing sector for 2006, by Dun & Bradstreet India.

### 4. INVESTMENTS / GROWTH PLANS

#### 4.1 PROJECTS

##### • Isomerisation & Mixed Xylene Projects

The ISOM project to enable production of Motor Spirit of Euro III/IV quality and Mixed Xylene project for producing value added Mixed Xylene were commissioned during the year and were dedicated to the Nation, by the Hon'ble Union Minister of Petroleum and Natural Gas Shri Murli Deora, on 2<sup>nd</sup> December, 2006.

##### • Phase III – Refinery Upgradation and Expansion Project

As you are aware, your Company has taken up implementation of a large Refinery Upgradation and Expansion project at a cost of Rs.7943 Crore. This will increase the distillate yield by about 10%, eliminating the low value Black Oils, even while using more of low price High Sulphur and Heavy Crude. The Project includes increase in the refining capacity from the existing 9.69 MMTPA to 15 MMTPA with a total project implementation period of 48 months. Engineers India Ltd., has been appointed as a Project Management Consultant for this Project in June 2006. Licensor selection process for Major Units is in progress. In view of substantial additional Refining and

Petrochemicals capacity being planned and implemented in India as well as globally, the Licensors and equipment suppliers are stretched beyond their capacity leading to delayed responses/ deliveries. Though all out efforts are being taken to neutralise the delays through catch-up plans, your Company's project completion may get delayed.

##### • Rajasthan Refinery

As the members are aware Government of India nominated your Company in September, 2005 to purchase the entire crude oil to be produced from various oil blocks in Rajasthan.

As earlier reported, the establishment of this refinery will largely depend on the availability of crude oil from Rajasthan blocks at a reasonable price as well as adequate fiscal incentives from the State Government, so as to ensure economic viability of the project. Agreements with Cairn India Limited and State Government of Rajasthan are expected to be finalised soon.

### 4.2 JOINT VENTURES

#### • Aromatics Complex

A separate SPV Company promoted by ONGC and MRPL in the name of ONGC Mangalore Petrochemicals Ltd. (OMPL) has been incorporated for implementing the Aromatics Project, estimated to cost about Rs. 4852 Crore, to produce Paraxylene, a value added product, using Naphtha feed stock from MRPL. ONGC will contribute 46% equity (Rs.744 Crore) while MRPL will have 3% equity (Rs.48 Crore). M/s. Toyo Engineering India Ltd., have been appointed as Project Management Consultant (PMC) in February, 2007. The Project is expected to be completed in 47 months time (December, 2010).

#### • Kakinada Refinery and SEZ

The financial appraisal report submitted by SBI Capital Market for the Kakinada Refinery, showed that 7.5 MMTPA Refinery Project was not financially viable. However, keeping in view the long-term scenario in which, the petroleum consumption in the country is expected to go up as brought out in the Market Study conducted by Nexant a preliminary in-house assessment was taken up, which indicated that project can be viable if the capacity is enhanced to 15 MMTPA. Kakinada Refinery and Petrochemicals Private Ltd (KRPL) has therefore engaged EIL for conducting a Techno Economic Feasibility Study for setting up 15 MMTPA Refinery at Kakinada. Kakinada SEZ Private Limited (KSEZ) has been notified as Special Economic Zone (SEZ) by Government of India on 23<sup>rd</sup> April, 2007. MRPL/ONGC would subscribe 26% equity in KSEZ and 46% equity in KRPL.

### 5. CONSERVATION OF ENERGY, TECHNOLOGY ABSORPTION AND FOREIGN EXCHANGE EARNINGS AND OUTGO

The additional information required to be disclosed pursuant to Section 217(1)(e) of the Companies Act, 1956 read with the Companies (Disclosure of Particulars in the Report of Directors) Rules, 1988 is given in 'Annexure - I' which forms part of this Report.

### 6. PARTICULARS OF EMPLOYEES

There are no employees whose particulars are required to be shown in terms of the provisions of Section 217(2A) of the Companies Act, 1956 read with the Companies (Particulars of Employees) Rules, 1975 as amended.

### 7. HUMAN RESOURCES

- The long term agreement with the Employees Union has come to an end on 31<sup>st</sup> March, 2007. Your Company is in the process of aligning its Pay scales





with PSU Scales, as per DPE guidelines. Negotiations with the Employees for a fresh long term settlement are in progress. The Company continues to enjoy a cordial and harmonious relationship with its employees.

- Number of employees as on 31.03.2007 was 1046 which include 36 women employees. Number of employees belonging to SC and ST were 34 and 12 respectively.

## 8. OFFICIAL LANGUAGE

The Company is implementing the Official Language Policy as per the Annual Programme given by Department of Official Language, Ministry of Home Affairs, Government of India. Hindi workshops have been conducted at regular intervals at Mangalore and Mumbai offices during the year. The quarterly house journal of the Company "Refinews" has been made bilingual and articles and write-ups have been published in Hindi. Regular classes are conducted for Prabodh and Praveen for employees. More computers are installed with APS Bilingual Software to enable employees to undertake correspondence in Hindi. Various manuals such as Standing Orders, Safety Manual, Materials Manual etc. in use in the Unit are now made bilingual.

## 9. VIGILANCE FUNCTION

The department is presently functioning headed by Head Vigilance deputed from ONGC under the overall supervision of CVO of ONGC. Scrutiny of various purchase orders of high value items and inspection of work under execution resulted in improving systems and procedures. First Vendors' Meet was organized during the year. Conduct, Discipline and Appeal (CDA) rules applicable to Management cadre employees have been introduced. Stress was laid on preventive vigilance and training programmes were organized with the assistance of office of CVO - ONGC, New Delhi.

## 10. COMMUNITY DEVELOPMENT

As a socially responsive organization, MRPL is committed to the well being of the communities around the refinery area. Various development activities taken up by the Company include construction of approach roads, assistance for expansion of the existing school buildings, free artificial limb camps, drinking water supply schemes, scholarships to meritorious students in schools in and around the Refinery and providing computers to rural schools, distribution of Benches and Desks to schools, providing toilet facilities etc. MRPL has taken up development of SC/ST colony in the vicinity of the refinery. Action plan drawn in this connection aims at comprehensive Socio Economic development of the families. 30 nos. of precast ferro cement toilets and bathrooms were provided to the residents of this SC/ST colony. In addition, the internal roads of the colony have been asphalted. Your Company have plans to organize skills development programme for women of the colony. As a measure of goodwill to the project displaced families, your Company is providing a overhead water tank to ease drinking water problem of the rehabilitation colony. A skills development centre for women from fishermen community under women empowerment programme has also been built.

## 11. DIRECTORS

- 11.1 Shri Prabh Das, Government Director, who has been on MRPL Board since 2<sup>nd</sup> June, 2006 has resigned from the Board w.e.f 8<sup>th</sup> January, 2007 consequent to change in the nomination by Government.
- 11.2 The President of India has appointed Shri V. P. Joy, Director (R&A), MOP&NG as a Government Director on the Board of MRPL Shri V. P. Joy was appointed as an Additional Director on the Board of MRPL w.e.f. 15<sup>th</sup> January, 2007. Shri V. P. Joy has resigned from the Board w.e.f. 1<sup>st</sup> August, 2007,

consequent upon his transfer to Ministry of Power, Government of India.

- 11.3 The Board places on record its deep appreciation for the services rendered and valuable guidance provided by Shri Prabh Das and Shri V. P. Joy during their tenure as Directors of MRPL.
- 11.4 The President of India has appointed Shri V. K. Dewangan, Director, MOP&NG as a Government Director on the Board of MRPL. Shri V. K. Dewangan was appointed as an Additional Director on the Board of MRPL w.e.f 10<sup>th</sup> March, 2007.
- 11.5 In accordance with the provisions of the Companies Act, 1956 and Articles of Association of the Company, Dr. A. K. Balyan will retire by rotation at the 19<sup>th</sup> Annual General Meeting of the Company. Dr. A. K. Balyan, being eligible, offers himself for re-appointment.
- 11.6 In accordance with the provisions of the Companies Act, 1956 and Articles of Association of the Company, Shri V. K. Dewangan, the Additional Director will retire at the 19<sup>th</sup> Annual General Meeting of the Company, Shri V. K. Dewangan being eligible, offers himself for re-appointment.
- 11.7 Brief resumes of the Directors seeking appointment/re-appointment, together with the nature of their expertise in specific functional areas, the names of the companies in which they hold the directorship and the membership /chairmanship of committees of the Board, and shareholding in the Company as stipulated under Clause 49 of the Listing Agreement with the Stock Exchanges are given in the Annexure to the AGM notice.
- 11.8 The Company continues to pursue with the Government of India (Ministry of Petroleum & Natural Gas) for advising the names of the Independent Directors which are required to be appointed on the Board of the Company pursuant to the Listing requirements.

## 12. DIRECTORS' RESPONSIBILITY STATEMENT

In accordance with the provisions of Section 217 (2AA) of the Companies Act, 1956 your Directors state that:

- (a) The Annual Accounts have been prepared in compliance with the applicable Accounting Standards together with proper explanations relating to material departures;
- (b) The Directors have selected such accounting policies and applied them consistently and made reasonable and prudent judgments and estimates, so as to give a true and fair view of the state of affairs of the Company at the end of the financial year, and of the Profit & Loss of the Company for that period;
- (c) The Directors took proper and sufficient care for the maintenance of proper and adequate accounting records in accordance with the provisions of this Act for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;
- (d) The Annual Accounts are prepared on a "Going Concern" basis.

## 13. FIXED DEPOSIT

The Company has not accepted any fixed deposit during the year from the public.

## 14. AUDITORS

- 14.1 M/s. Varma & Varma, Chartered Accountants were appointed as Statutory Auditors of the Company for the Financial Year 2006-07 by Comptroller & Auditor General of India (C&AG).
- 14.2 The review and comments of the C&AG at Annexure - II forms part of this Report.
- 14.3 The Government of India, Ministry of Company Affairs (Cost Audit Branch), by its order dated



24<sup>th</sup> January 2007 has directed that an audit of the cost accounts maintained by the company in respect of Petroleum Industry for the year ending 31<sup>st</sup> March, 2007 and also for every Financial Year thereafter continuously be conducted by an Auditor with the qualifications prescribed in Section 233 B (1) of the Companies Act, 1956 until further orders. Accordingly, M/s. J.V. Associates, Cost Accountants, Chennai have been appointed as Cost Auditors of the company for the Financial Year 2006-07 with the approval of the Government of India.

#### 15. CORPORATE GOVERNANCE

- 15.1 The Company has complied with all the mandatory provisions of Clause 49 of the Listing Agreement relating to the Corporate Governance requirements, except with the requirement of Independent Directors on the Board of the Company. Your Company is pursuing with the Administrative Ministry, MOP&NG for appointment of the Independent Directors on the Board. The Annual Report contains a separate section on Corporate Governance.
- 15.2 Your Company is listed with the Bombay Stock Exchange Limited and National Stock Exchange Limited. Mangalore Stock Exchange was de-recognised by SEBI on 4<sup>th</sup> October, 2006. Hence, the Mangalore Stock Exchange has ceased to be a recognized stock exchange and your Company's shares are no longer listed in the same.
- 15.3 As required under Clause 49 of the Listing Agreement with Stock Exchanges, your Company has obtained the Certificate from the Auditors of the Company, for Compliance of Corporate Governance which is annexed to and forms part of the Annual Report.
- 15.4 The Management Discussion and Analysis Report forms part of the Annual Report.

#### 16. ACKNOWLEDGEMENT:

- 16.1 Your Directors sincerely thank the Government of

India (GOI), Ministry of Petroleum and Natural Gas (MOP&NG), Ministry of Finance (MOF), and other Ministries and Departments of the Central Government and the State Governments of Karnataka and Andhra Pradesh for their valuable support and co-operation.

- 16.2 Your Directors gratefully acknowledge the support and direction provided by the parent Company, ONGC.
- 16.3 Your Directors appreciate the continuing co-operation and support received from New Mangalore Port Trust, Financial Institutions, Banks and all other stakeholders such as suppliers of crude oil and other inputs, vendors, contractors, transporters and others.
- 16.4 Your Directors express their sincere thanks to all the shareholders for their continuous confidence shown in the management and the Company.
- 16.5 Your Company recognizes its valued customers for their continued patronage for the products of the Company.
- 16.6 Your Directors wish to place on record their appreciation for the valuable contribution made by each one of the employees of the Company who continued to bestow total commitment towards the pursuits of excellence. The Company look forward to their services with zeal and dedication to scale further greater heights.

For and on behalf of the Board

(R. S. SHARMA)  
Chairman

Place : New Delhi

Date : 9<sup>th</sup> August, 2007

#### ANNEXURE I TO THE DIRECTOR'S REPORT

##### A. CONSERVATION OF ENERGY

Company continued its emphasis on energy conservation through operational optimization, continuous monitoring and implementation of several energy conservation schemes

- a) Major energy conservation & resource optimization measures taken during the year
  - i) Crude preheating by the recovery of Fuel Oil product heat in phase-2 crude distillation unit.
  - ii) Antifoulant injection carried out in phase 1 Crude Distillation unit, which minimized the heat exchanger fouling rate & thus improved heat recovery over the period.
  - iii) Steam lines insulation improvement.
  - iv) Refinery sour water stripper operation optimization, thereby reducing steam consumption.
  - v) Reducing fuel gas consumption & increasing waste heat steam generation by routing Phase-2 Amine flash column hydrocarbon vapors to Sulfur recovery unit incinerator.
  - vi) Double seals were provided for five existing floating roof tanks & six new floating roof tanks, thereby reducing fugitive emissions.
- b) Additional investments and proposals, if any, being implemented/ under consideration for reduction of consumption of energy / resources.

- i) Condensate heat recovery for Air-conditioning Central Control Room, by vapor absorption mechanism.
- ii) Fuel Oil Emulsification trial at power plant to reduce the fuel oil consumption at boilers.
- iii) Condensate Recovery in CPP.
- iv) Air preheater replacement, for improving heat recovery in crude distillation unit furnaces, thereby reducing fuel oil consumption.
- v) Advanced Process control system implementation in Crude Distillation Unit-2.
- vi) On-line furnace tube external surface cleaning by chemical spraying in Crude Distillation Unit-2.
- c) The measures (a) above resulted in reduction of energy consumption / resource optimization of up to 9800 MT/year, which is equivalent to a saving of approx. Rs.130 Million/year.
- d) Fuel & Loss in the Refinery for the year 2006-07 at 6.53% wt on crude as compared to 6.44% wt for 2005-06, was marginally high on account of commissioning of ISOM & Mixed Xylene units. Specific energy consumption was 313.2 MBTU/BBL in 2006-07 as compared to 317.0 MBTU/BBL for the year 2005-06. The Energy number was 63.13 MBTU/BBL/NRGF for the year 2006-07 as compared to 64.84 MBTU/BBL/NRGF for 2005-06.
- e) Energy Conservation award  
MRPL has won for the fourth successive year, the



First Prize in the prestigious 'Jawaharlal Nehru Centenary Award for Energy conservation in refineries' for the year 2006-07, instituted by Ministry of Petroleum & Natural Gas (MOP&NG). (MRPL had won this award in the previous years 2003-04, 2004-05 and 2005-06 also). The award is based on the annual performance of the refinery in the area of energy consumption measured in terms of Specific Energy Consumption (MBTU/BBL/NRGF).

**MRPL's Energy performance during the last three years is as follows**

Year	Crude thruput, MMTPA	NRG factor (CHT method)	MBN (MBTU/BBL/NRGF)
2004-05	11.85	4.922	64.77
2005-06	12.12	4.889	64.84
2006-07	12.54	4.962	63.13

#### FORM – A

Form for disclosure of particulars with respect to Conservation of Energy

##### Power and Fuel Consumption

**Current year  
2006-07**      **Previous year  
2005-06**

#### 1. Electricity

##### a) Purchased

Unit (Million KWH)	3.85	4.21
Total Amount (Rs. Million)	28.34	30.58
Rate / Unit (Rs./KWH)*	7.36	7.26

\* Includes demand charges of Rs. 9.99 Million (Rs.11.509 Million for 2005-06). The unit cost per KWH excluding Demand charges is Rs.4.50 (Rs. 4.51 for 2005-06).

##### b) Own Generation

##### i) Through Diesel Generator (at Sarpady)

Unit (Million KWH)	2.42	1.38
Unit per ltr. Of Diesel (KWH/ltr.)	3.50	3.52
Cost / Unit (Rs./KWH)	8.64	7.52

##### ii) Through Steam turbine generator

Unit (Million KWH)	582.10	567.50
Unit per ltr. Of Fuel Oil (KWH/ltr.)	2.08	2.13
Cost / Unit (Rs./KWH)**	6.70	5.91

\*\* Includes Steam cost in refinery operation.

#### 2. Fuel Oil

Quantity (MT) (Oil+Gas)	732685	720714
Total Amount (Rs. In Million)	10,257.59	9,486.59
Average Rate (Rs./MT)	14,538.87	13,162.77

#### 3. Others / Internal Generation

##### Diesel (at Sarapady)

Quantity (KL)	691.59	392.98
Total Cost (Rs. Million)	20.91	10.40
Rate (Rs./KL)	30,228.00	26,465.30

#### 4. Consumption per unit production

Total crude processed (TPA)	12535637	12117367
Total Fuel Consumed (TPA)***	819136	780609
Total Electricity (KWH)	582.75	567.09
Fuel Consumption/ MT of Crude processed	0.0653	0.0644
Electricity Consumption KWH / MT of Crude processed	46.49	46.80

\*\*\* includes fuel and loss

#### FORM – B

Form for disclosure of particulars with respect to Technology Absorption

#### A) Research and Development (R&D)

##### 1. Specific Areas in which Research and Development (R&D) carried out by the Company:

- ♦ Crude Assay For MRPL  
Sokol – Crude Assay and Iran Heavy - Crude Assay was carried out using TBP apparatus.
- ♦ Crude Assay For ONGC  
Ankaleshwar Crude and Ankaleshwar + Condensate Assay was carried out ONGC Sagariakshmi D1 crude assay was carried out.
- ♦ Spent Caustic Treatment with Chlorine Dioxide.  
Experiments were carried out to destroy odour causing phenolic compounds in spent caustic using Chlorine Dioxide as an oxidant.
- ♦ Study on Lubricity characteristics of Hydrocracker Diesel with lubricity additives.  
Lubricity characteristics of Hydrocracker Diesel (phase I and phase II) with and without Lubricity additives were studied.
- ♦ Aviation Turbine Fuel production from Nile Crude:  
Characteristics of ATF produced from Nile Crude using FTIR was studied. Specific energy of ATF using Bomb Calorimeter and NMR
- ♦ SKO – Characteristics with respect to Burning Quality, Smoke Point and Aromatics.  
Study of SKO – Characteristics (Burning Quality, Smoke Point and Aromatics) with respect to various crude and steams was carried out.
- ♦ Study on variation of critical parameters at various stages of raw water, DM water and its effect on Steam purity at CPP and various units' battery limits.  
Study was undertaken to monitor the steam purity to ensure proper quality is maintained at all times. The study has helped to take corrective action.
- ♦ Study of Bromine Index of Mixed Xylene product.  
Bromine Index Mixed Xylene unit. CCR unit samples were monitored as per ASTM method.
- ♦ Development of suitable Bio Additive for HSD.  
FAME Bio additive of vegetable oil origin was prepared and studied its characteristic for use in HSD.

##### 2. Benefits derived as a result of the above R&D:

- ♦ Assay of Sokol – Crude and Iran Heavy – Crude. Crude assay provided an indication of product yield pattern and helped to optimise unit-operating conditions to achieve the same yield pattern.
- ♦ Spent caustic treatment with Chlorine Dioxide, for destroying the odour causing phenols was studied at plant scale using chlorine dioxide generator and treated effluent with new set up. Experiments proved that undesirable odour-causing phenols from the treated effluent and spent caustic could be destroyed very easily. Experiments indicated very high treatment cost compared to the existing Hydrogen Peroxide treatment. But on environmental point of view Chlorine Dioxide treatment is beneficial.
- ♦ Study of Lubricity of Hydrocracker Diesel (phase I and phase II) with and without Lubricity additives has helped to produce Diesel with required lubricity value.
- ♦ Study of ATF produced from Nile crude using FTIR provided us to understand functional Hydrocarbon group present in the ATF and data obtained from the above study was submitted to CEMILAC (Defence authorities) for approval.





- ♦ Further data obtained from the study of SKO characteristics – Burning Quality, Smoke Point and Aromatics will be provided to BIS to propose alternative tests to time consuming (24 Hours) burning quality test. If BIS accept it, SKO can be certified within 5-6 hours instead of 24 hours.
  - ♦ Study on variation of critical parameters across the various stages of wastewater treatment sections provided a useful information and data for optimizing the operating conditions.
  - ♦ The study of bromine index has helped Management to take a decision on Clay Tower for improving the Bromine Index as per the customer requirement.
  - ♦ FAME Bio additive of vegetable oil origin was prepared and studied for its characteristics, compatibility with HSD, storage stability of HSD with 1000 ppm dosage. Performance was evaluated using the actual engine. Based on the laboratory performance results it has helped to go for in line vehicle test.
- 3. Future plan of action:**
- ♦ Corrosion monitoring and inhibition (Water and Sulfide corrosion) in Refinery.
  - ♦ Crude Evaluation
  - ♦ Additive Evaluation.
  - ♦ To study used lubricating oil and transformer oil performance using FTIR, WDXRF, ICP MS, and Viscosity Index analyser.
  - ♦ Catalysts Surface Area.
  - ♦ Further Studies on Bio additive.
  - ♦ Oxidation Stability of Gasoline produced from various streams with and without MFA.
- 4. Expenditure on R&D:**
- a) Capital: Rs. 67.51 Lakhs
  - b) Recurring: Rs. 4.1 Lakhs
  - c) Total: Rs. 71.61 Lakhs
  - d) Total R&D expenditure as percentage of total Turn over: - Negligible
- B) Technology Absorption, Adaptation & Innovation**
- i) Efforts, in brief, made towards technology absorption, adaptation and innovation.**
- a) Technologies for Process Units of Phase-I & II have been fully absorbed.
  - b) Adaptation and innovation: Changes have been made in the process parameters and energy recovery, as a part of successful adaptation, particularly in Hydrocracker units, CCR and GOHDS units.
  - c) New process units, namely ISOM for producing Euro 3 & 4 grade MS & Mixed Xylene for value added products were commissioned.
- ii) Benefits derived as a result of the above efforts, e.g., product improvement, cost reduction, product development, import substitution, etc.**
- Refinery thruput has gone up by 3%, Energy consumption as Fuel & Loss has come down by 0.14% (excluding the fuel consumed for the commissioning & running of new units namely ISOM & Mixed Xylene), various grades of products including Euro III / IV qualities of MS & HSD are produced and sold in domestic market or exported.
- iii) In case of imported technology (imported during last 5 years reckoned from the beginning of the financial year), following information may be furnished.**
- a) Technology imported  
Isomerisation process, Variable frequency drives
  - b) Year of import : 2004-05
  - c) Has technology been fully absorbed?  
Yes
  - d) If not fully absorbed, areas where this has not taken place, reasons therefor and future plans of action. : Not applicable
- C) FOREIGN EXCHANGE EARNINGS AND OUTGO**  
(Rs. in Million)
- |   | 2006-2007  | 2005-2006  |
|---|------------|------------|
| Foreign Exchange Earnings – FOB value of exports (includes Rs.2,066.65 Million (previous year nil) through M/s. Bharat Petroleum Corporation Ltd.). | 116,152.70 | 119,210.73 |
| Foreign Exchange Outgo  | 186,298.66 | 164,952.47 |

## Annexure II to The Directors' Report

### COMMENTS OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA U/S 619 (4) OF THE COMPANIES ACT, 1956 ON THE ACCOUNTS OF MANGALORE REFINERY AND PETROCHEMICALS LIMITED FOR THE YEAR ENDED 31<sup>ST</sup> MARCH, 2007

The preparation of financial statements of Mangalore Refinery and Petrochemicals Limited for the year ended 31 March, 2007 in accordance with the financial reporting framework prescribed under the Companies Act, 1956 is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under Section 619 (2) of the Companies Act, 1956 are responsible for expressing opinion on these financial statements under section 227 of the Companies Act, 1956 based on independent audit in accordance with the auditing assurance standards prescribed by their professional body the Institute of Chartered Accountants of India. This is stated to have been done by them vide their Audit Report dated 11 May, 2007.

I, on the behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit under section 619 (3) (b) of the Companies Act, 1956 of the financial statements of Mangalore Refinery and Petrochemicals Limited for the year ended 31 March, 2007. On the basis of my audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to Statutory Auditors' report under section 619(4) of the Companies Act. 1956,

For and on the behalf of the  
Comptroller and Auditor General of India

**REVATHY IYER**

Principal Director of Commercial Audit &  
ex-officio Member, Audit Board - II, Mumbai

Place : Mumbai  
Date : 22nd June, 2007





## MANAGEMENT DISCUSSION AND ANALYSIS REPORT (MDAR)

### 1. INDUSTRY

- 1.1 The most significant development in the global market has been the constant volatility in crude oil prices during the last couple of years. Considering the geo-political uncertainties, the seasonality of demand and speculative trading, the stable price outlook does not appear to be in sight.
- 1.2 The prices of Benchmark Brent crude oil in the international market which reached a historic high of US \$ 78.69 per bbl on 8<sup>th</sup> August, 2006 declined to US \$ 55.89 on 31<sup>st</sup> October, 2006. Since then the prices have again shown increasing trend and is now hovering around US \$ 75 per bbl. The impact of this unprecedented rise in global prices has led to substantial increase in the burden of subsidy on PDS Kerosene and domestic LPG which have ballooned to unprecedented levels. The burden of subsidies for the year 2006-07 is Rs.29184 Crore on account of PDS Kerosene and Domestic LPG. To add to this, in order to mitigate the impact of total 'pass-through' of international prices of Petrol and Diesel to domestic consumers, the Government has also been continuing to regulate the Retail prices of Petrol and Diesel, which is resulting in substantial under-recoveries on sales of these products by Oil Marketing Companies (OMCs). The recent appreciation of Rupee against US \$, however, has reduced the under-recoveries of OMCs to some extent.
- 1.3 As already reported, effective from 15.06.2006 the Government implemented the recommendations of Dr. Rangarajan Committee only partially, to reduce the burden of increasing prices on the consumers. These recommendations related to the reduction in custom duty on Petrol and Diesel from 10% to 7.5% and substitution of Import Parity Price (IPP) pricing formula to Trade Price Parity (TPP) (80% IPP + 20% Export Parity Price). Both these steps resulted in reduction of margins for Refineries. Other recommendations like termination of freight equalization, specific Excise Duty in lieu of Ad-valorem Excise Duty, subsidized Kerosene to only people Below Poverty Line (BPL) and gradual increase in LPG prices to the level of international prices etc. are yet to be implemented by the Govt. Effective from 1.04.2006, the Refineries are now being paid IPP for LPG and Kerosene without any discount.
- 1.4 An appropriate pricing regime which promotes efficiency, needs to be evolved in relation to petrol and diesel on the one hand and domestic LPG and PDS kerosene on the other. Very high Sales Taxes and other forms of duties and taxes imposed by State Governments, need urgent review and reduction. The initiative of Government to reduce Excise duty from 8% to 6% and C.S.T from 4% to 3% w.e.f. 1.04.2007 and gradually phase out CST in next 3 years are steps in the right direction. Removal of irrecoverable levies (CST, Entry Tax etc.) from the system will ensure level playing field in the country.

### 2. STRATEGY

- 2.1 India from being a net importer of refined petroleum products upto 1999-00, has emerged as a net exporter. The export of Petroleum Products during 2006-07 amounted to US \$ 17.6 Billion as against US \$ 11.4 Billion during 2005-06. Given the expected growth in overall product demand at 4% compounded annually, coupled with fresh capacity additions, the domestic refining capacity will remain in excess of domestic demand for petroleum products for a very long time. This fact has been reiterated in the 11<sup>th</sup> Plan document, issued by the Government of India.

- 2.2 The Company continues to lay more emphasis on developing export potentials to sell its surplus production capacity. The Company is presently executing the Term Contract finalized last year with State Trading Corporation (STC), Mauritius to export about 1.03 MMT Products to Mauritius, over a period of one year beginning August, 2006. The company signed a 3 years agreement with STC, Mauritius on 6<sup>th</sup> July, 2007 for supply of petroleum products (Gasoline, Diesel, ATF and Furnace Oil) worth approx. US\$ 2 Billion to be effective August, 2007. The Term Contract to supply High Speed Diesel to ENOC (Emirates National Oil Company of Dubai) has been renewed from January 2007 to December 2007 (approx. 500,000 T).
- 2.3 The present configuration of the refinery produces significant quantity of Black Oil and less distillates, which reduce the refining margins. The refinery upgradation and expansion project designed to improve distillate yield and for increased processing of low priced heavy, sour and high TAN crudes, coupled with increase in capacity from 9.69 MMTPA to 15 MMTPA, is under implementation. This project is expected to significantly improve the Refinery Margins and will ensure long-term economic viability of the company's operations. The project will also enable production of propylene, a high value added product.
- 2.4 To add significant incremental value to the available naphtha, an Aromatic Complex is being set up by ONGC Mangalore Petrochemicals Ltd (a SPV Company of ONGC and MRPL) in Mangalore SEZ, to produce Paraxylene and Benzene. Setting up of an Olefin Complex is also being evaluated at the Mangalore SEZ.
- 2.5 While the long term goal of setting up 500 Retail Outlets and substantial increase in Direct Sales to large consumers like Railways, State Transport Undertakings and large industrial consumers will continue to be our focus, in short to medium term, the company is cautiously proceeding to set up its retail outlets, in view of heavy underrecoveries in the Retail Sector due to Government's refusal to issue Bonds to MRPL and NRL (both Government of India Companies) for such underrecoveries. The company is targeting to set up atleast 15 retail outlets in the current FY 2007-08. MRPL is now the sole supplier for all the 30 depots of Bangalore Municipal Transport Corporation and 6 depots of Karnataka State Road Transport Corporation. MRPL also continues to supply diesel to Indian Railways directly.
- 2.6 In order to encash the marketing margins available in ATF sales to Airlines MRPL has decided to market ATF directly to Airlines. Discussions with various Airlines are in an advanced stage. HPCL has also agreed to share their AFS infrastructure in a few Airports with MRPL.

### 3. ENVIRONMENT MANAGEMENT

In Environmental Management, the Company's philosophy is to perform 'beyond compliance' – that is, perform better than minimum required by statutes. The Refinery is certified with ISO 14001 for Environment Management Systems. The major achievements include:

- 70-75% of the treated effluent is recycled.
- SOX emissions at 50% of Pollution Control Board limits, third party monitoring of ambient air quality is done around the refinery.
- MRPL was First Refinery in India to produce Euro III grade Petrol and Diesel
- MRPL has also started producing Euro IV grade Diesel/ Petrol, 2 years ahead of target
- Generation of Bio gas from canteen /colony waste is being taken up.



- Innovative methods of solid waste reduction. Bio remediation of solid wastes.
- Rain-water harvesting scheme has resulted in recovering 3000-5000 m<sup>3</sup>/day of rain water and saving equivalent quantity of raw water.
- MRPL has put into use four electric cars for its internal transport, as a measure of fuel-saving and emission-reduction.
- M/s. Price Waterhouse Coopers (PWC) has been appointed as a Consultant, to identify various projects to reduce Green House gas emissions for the Clean Development Mechanism (CDM). Once these projects are approved by the concerned authorities, including the Ministry of Environment & Forests and the UN Commission, MRPL will be able to trade in carbon credits. This is an excellent initiative, which will go a long way in our efforts towards better Environment Management, besides creating wealth for the company.
- Exchange fluctuations,
- Infrastructure availability,
- Product evacuation,
- Health, Safety & Environment,
- Regulatory compliances,
- Manpower and Technology

The Company has taken a comprehensive Mega Risk insurance cover for its assets, to safeguard them from various unforeseen risks as well as from the loss of profit, due to business interruption.

#### 4. SAFETY PERFORMANCE

- MRPL continues to follow a proactive approach towards safe work practices. Integrated training programmes for Company's employees and secondary workforce are being conducted periodically. Regular internal and external safety audits continue to be carried out. All process plant modifications are verified through a Hazard and Operability Study (HAZOP) before implementation. MRPL is promoting a safe work culture at all level of operations.
- Regular inspection and monitoring is carried out by operating personnel with the assistance from Fire and Safety department. Periodic mock drills are organised to ensure the readiness of the system. Employee participation is encouraged through area safety committees and the activities are monitored by the Management through review meetings. The Company also conducts regular medical check up for all employees and Special tests for Employees working in high noise and dust areas, etc.
- The company has put in a creditable performance in safety during the year. Company has not suffered any Reportable Lost Time Injury (RLTI) since 09.12.2003. This is the third year in succession MRPL employees have achieved accident free working without RLTI. The Refinery has completed 1208 days without RLTI as on 31.03.2007 i.e. 7.20 Million Man Hours Worked without RLTI. There was no major outbreak of fire during the year.
- Exercises on Onsite /Off site Emergency Response Management Plan (Mock Exercises) are being conducted internally at critical locations in various plants and in presence of District Administration, District Crisis Group Members, Mutual Aid Members, and local leaders in the Plants / Units based on various scenarios, to enable the Employees as well as Management to tackle emergencies in critical situations. Regular review meetings are conducted and recommendations of observers implemented and complied with.

#### 5. RISKS AND CONCERNS

- 5.1 MRPL laid down procedures for the continuous identification and Mitigation of various risks like
- Crude oil supply,

5.2 Crude oil and Petroleum products are globally traded commodities and therefore, the prices are influenced by the international market forces of demand-supply and other geo political uncertainties etc. Like all other refineries, MRPL is also exposed to the risk of volatility in international prices of crude oil and petroleum products. Many actions have been taken to minimize such risks.

5.3 Domestic sales contribute to a major part of the revenue of the Company. The state of the economy and the evacuation of product by PSU OMCs for domestic market, therefore, influence the turnover and profitability. The Customs & Excise Duty regime on petroleum products and crude oil also exert significant influence on the margins of the Company.

#### 6. INTERNAL CONTROL SYSTEMS AND THEIR ADEQUACY

The Company has in place the required internal control systems and procedures to ensure optimal use of Company's resources. The Company's internal audit department conducts regular audits of various operational and financial matters. The audit observations are periodically reviewed by the Audit Committee of the Board of Directors.

#### 7. FINANCIAL PERFORMANCE

The refinery achieved its highest-ever crude thruput of 12.54 MMT during the year (up 3% from 12.12 MMT) and produced 11.72 MMT of finished products (up 3% from 11.34 MMT). Turnover during the year was Rs. 32,377 Crore (up 15% from Rs. 28,243 Crore); this includes exports amounting to Rs. 11,615 Crore. The company has reported net profit of Rs. 526 Crore (up 41% from Rs. 372 Crore).

#### 8. HUMAN RESOURCES

- The long term agreement with the Employees Union has come to an end on 31<sup>st</sup> March, 2007. Negotiations with the Employees for a fresh long term settlement are in progress. MRPL, being a Schedule 'B' PSU, is in the process of aligning its Pay scales with PSU Scales. The company continues to enjoy a cordial and harmonious relationship with its employees.
- Number of employees as on 31.03.2007 was 1046 which include 36 women employees. Number of employees belonging to SC and ST were 34 and 12 respectively.

#### 9. CAUTIONARY STATEMENT

Certain statements made in the MDA Report relating to company's out look, expectation and estimate etc., may be considered forward looking statements within the meaning of applicable law and regulations. Actual results may differ from such expectations whether express or implied. Several factors could make significant impact on the company's operation. These include geo political uncertainties affecting demand and supply and Govt. regulations and vagaries of nature etc., over which the company does not have any control.