# Management Discussion and Analysis

## 1. OPERATING ENVIRONMENT

### 1.1 Macro-environment

In 2004, the global economy continued to show good development prospects. The world petroleum consumption surpassed 80 million barrels/day, representing an increase of over 3% from that of the previous year. Against the backdrop of macroeconomic adjustment and control in the PRC, the country's economy sustained relatively stable and rapid development, with a Gross Domestic Product (GDP) growth rate of 9.5% when compared with that of the previous year. The domestic petroleum consumption increased rapidly. The national crude oil throughput rose by 13.70% to 273 million tonnes, when compared with that of the previous year. The apparent consumption of petroleum products (including gasoline, diesel, kerosene) amounted to 157.06 million tonnes, representing an increase of 19.0% from that of the previous year.

### 1.2 International oil prices

In 2004, the world petrochemical industry experienced a new upswing. Global demand for petroleum remained robust, while international crude oil prices continued to rise and fluctuate at high levels. Brent crude oil price continued to set new record, reaching as high as 52.03 $/bbl at one point. The average dated price (FOB) of Brent crude oil for the entire year was 38.27 $/bbl, representing a rise of 32.74% from that of the previous year.

In 2004, owing to the structural change in the supply and demand of international petroleum, discrepancy in the prices of sour crude oil (as represented by Dubai crude oil) and low sulphur crude oil (as represented by Brent crude oil) continued to increase. Such situation facilitated control of crude oil cost by refineries that principally process sour crude oil.

**Dated Price Movement of Brent and Dubai Crude Oil in 2004**


Source of information: the Platts

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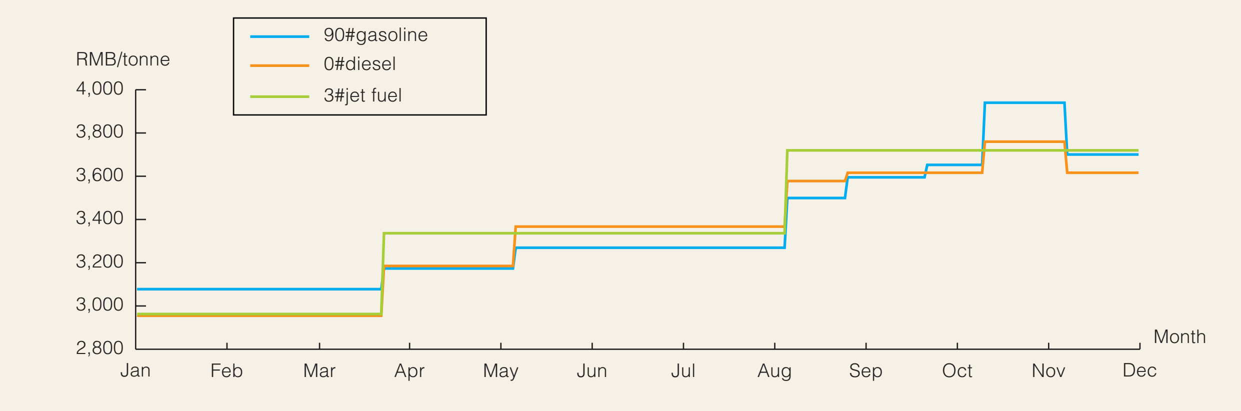
### 1.3 Domestic price of petroleum products

In 2004, the State made adjustments to the prices of gasoline in March and August, and adjusted the prices of diesel in May and August. Prices of jet fuel were adjusted in March and August. The Company also adjusted its ex-factory prices of gasoline, diesel in March, May, September, October, November and December.

**The movement of ex-factory prices of the Company's major products in 2004 (inclusive of tax)**




## 2. FEEDSTOCK THROUGHPUT, REFINING MARGIN AND UNIT COMPLETE EXPENSE

### 2.1 Feedstock throughput

In 2004, the Company's feedstock throughput amounted to 16,140,900 tonnes, representing an increase of 18.41% from that of the previous year. Full utilisation of the comprehensive processing capacity for the entire year was achieved for the first time. Total throughput continued to be the highest among domestic refineries. The following table shows the composition of the feedstock throughput:

Unit: '000 tonnes

| | | 2004 | Percentage share (%) | 2003 | Percentage share (%) |
|---|---|---|---|---|---|
| By feedstock type | Imported crude oil | 14,751.31 | 91.39 | 10,896.93 | 79.94 |
| | Off-shore crude oil | 1,146.19 | 7.10 | 1,469.11 | 10.78 |
| | On-shore crude oil | 50.00 | 0.31 | 1,243.70 | 9.12 |
| | Purchased feedstock | 193.35 | 1.20 | 21.30 | 0.16 |
| By business type | The Company's own operation | 14,904.03 | 92.34 | 12,776.44 | 93.73 |
| | Third-party processing | 1,228.82 | 7.61 | 854.60 | 6.27 |
| | Imported material processing | 8.00 | 0.05 | 0.00 | 0.00 |
| | Total | 16,140.85 | 100.00 | 13,631.04 | 100.00 |

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In 2004, the rapid economic growth in the PRC led to drastic rise in the demand for petroleum products. The Company fully exploited its production scale and overall advantages to increase its feedstock throughput substantially for the purpose of meeting strong market demand. The Company's crude oil throughput for the year accounted for approximately 5.91% of the national crude oil throughput.

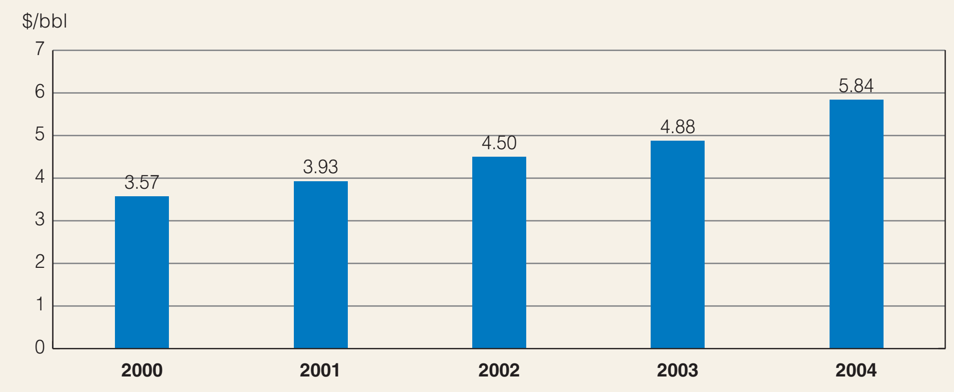
As the base for processing imported crude oil, the Company processed 14,751,300 tonnes of imported crude oil during the year. The proportion of imported crude oil to the Company's total feedstock throughput was 91.39%, representing an increase of 11.45 percentage points from that of the previous year.

The Company actively developed its third-party processing business. The throughput of crude oil for third-party processing business for the full year reached 1,228,800 tonnes, representing a 43.79% increase from that of the previous year. The Company had further enlarged its overall throughput.

### 2.2 Refining margin

In 2004, the world's refining industry entered the booming period of an upswing, characterised by strong demand. The refining margin in the international market remained at relatively high levels.

**Comparison of the Company's refining margin in recent years**




Note: In 2004, the Company's refining margin (including PX, PP) amounted to RMB352.76 per tonne (about 5.84 $/bbl), calculation based on: [(refining business' net sales – feedstock costs)/feedstock throughput (excluding third-party processing business)].

In 2004, due to high crude oil prices and the State's tightened control of petroleum product prices in accordance with macroeconomic adjustment needs, the growth rate of the Company's refining margin was lower than those of the Asian Pacific region. However, when compared with that of the previous year, the Company's refining margin rose by 19.67%. The main reasons are as follows:

First, control of crude oil processing cost. The Company captured the opportunities arising from enlarged price discrepancies between high and low sulphur crude oil,

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and fully exploited its advantages in facilities and techniques to increase sour crude oil throughput. The throughput of sour crude oil for the entire year amounted to 10,324,400 tonnes, which represented 36.67% from that of the previous year and accounted for 63.96% of feedstock throughput.

Second, increase in the Company's net sales due to rise in the output and price of PX and PP. Output of PX and PP for the year amounted to 366,400 tonnes and 159,800 tonnes respectively, representing increases of 300,400 tonnes and 148,700 tonnes from those of the previous year respectively. Net sales of PX and PP amounted to RMB3,318 million, representing an increase of 7.62 times from that of the previous year.

### 2.3 Unit complete expense

In 2004, the Company's unit refining cash operating cost was RMB81.43 per tonne (about 1.35 $/bbl), representing a decline of RMB5.61 per tonne from that of the previous year. First, the drop in unit refining cash operating cost was attributable to economies of scale resulted from substantial increase in throughput. The second reason was the strengthening of costs and expenses control. Maintenance expenses decreased by RMB6.89 per tonne and cost of direct labour was lowered by RMB3.90 per tonne when compared with those of the previous year. The third reason was the enhanced optimisation of internal public utility projects. Despite the increase in purchased power as a result of the operation of the new PP and PX units, the commissioning of the new electricity generator had reduced purchase of electricity from society and had thus facilitated better control of purchased power expenses, which rose by only RMB3.65 per tonne.

In 2004, the Company's unit complete expense was RMB138.56 per tonne (about 2.29 $/bbl), representing a decrease of RMB9.74 per tonne from that of the previous year. The decline in unit complete expense was mainly attributable to the decrease of RMB5.61 per tonne in unit refining cash operating cost and two other factors. First, the repayment of long-term borrowings had led to a drop of RMB2.60 per tonne in financial expense. Second, although the total depreciation amount increased as a result of the operation of new production facilities, the increase was smaller than the increase in crude oil throughput, thereby resulting in a decline of RMB1.53 per tonne in depreciation and amortisation per unit. Unit complete expense for the year remained at a leading level in the domestic industry.

**Unit refining cash operating cost and unit complete expense**

| (RMB/tonne) | 2004 | 2003 | Change (%) |
|---|---|---|---|
| Unit refining cash operating cost (note 1) | 81.43 | 87.04 | -6.45 |
| Unit complete expense (note 2) | 138.56 | 148.30 | -6.57 |

Notes:

1. Refining cash operating cost = Refining complete expenses – depreciation and amortisation – net financing costs. Unit refining cash operating cost = Refining cash operating cost/feedstock throughput.

2. Refining complete expenses refer to the costs and expenses of the refining business (excluding chemical fertiliser business and subsidiaries) for the period under review except for the cost of feedstock. Unit complete expense = Refining complete expenses/ feedstock throughput.

## 3 ANALYSIS OF OPERATING RESULTS[1]

### 3.1 Analysis of major operating results

The following table shows the major income and expenses listed on the Group's consolidated income statement for the period under review:

| | 2004 (RMB'000) | 2003 (RMB'000) | Change % |
|---|---|---|---|
| Turnover | 41,991,481 | 29,070,343 | 44.45 |
| Less: Business tax and surcharges | 1,653,499 | 1,161,365 | 42.38 |
| Net sales | 40,337,982 | 27,908,978 | 44.53 |
| Cost of sales | 35,968,587 | 25,628,659 | 40.35 |
| Gross profit | 4,369,395 | 2,280,319 | 91.61 |
| Selling, administrative and other operating expenses | 632,003 | 551,823 | 14.53 |
| Profit from operations | 3,786,010 | 1,696,399 | 123.18 |
| Net financing costs | 73,653 | 81,907 | -10.08 |
| Profit from ordinary activities before taxation | 3,765,434 | 1,609,594 | 133.94 |
| Profit attributable to shareholders | 2,613,288 | 1,087,987 | 140.19 |

1 The following discussion should be read together with the Group's financial statements and their notes contained in the annual report for this year.

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### 3.2 Net sales

In 2004, the Group's net sales amounted to RMB40,338 million, representing an increase of RMB12,429 million or 44.53% from RMB27,909 million of 2003. The growth in net sales was mainly due to increased sales volume of products, optimised product mix, substantial rise in the sales of petrochemical products and increase in product prices as a result of the Company's capturing of the opportunities arising from robust market demand.

The following table shows the composition of net sales:

| | 2004 | | 2003 | |
|---|---|---|---|---|
| | Net sales (RMB'000) | Sales volume ('000 tonnes) | Net sales (RMB'000) | Sales volume ('000 tonnes) |
| Gasoline | 5,701,390 | 2,120 | 4,815,426 | 2,061 |
| Diesel | 17,861,778 | 6,518 | 11,380,343 | 5,068 |
| Kerosene | 3,140,235 | 1,098 | 2,390,155 | 1,031 |
| Naphtha | 1,535,983 | 602 | 1,376,707 | 624 |
| Other chemical feedstock | 350,285 | 114 | 665,655 | 258 |
| PX | 2,046,850 | 318 | 321,628 | 65 |
| PP | 1,270,781 | 158 | 63,245 | 11 |
| Fuel oil | 360,512 | 249 | 167,756 | 114 |
| LPG | 2,671,846 | 848 | 1,809,013 | 687 |
| Solvent oil | 277,129 | 85 | 301,837 | 114 |
| BTX (excluding PX) | 1,656,094 | 294 | 1,035,065 | 275 |
| Propylene | 364,027 | 60 | 760,553 | 180 |
| Asphalt | 1,000,806 | 663 | 887,649 | 574 |
| Urea | 821,472 | 605 | 635,056 | 558 |
| Miscellaneous and service income | 146,381 | 183 | 991,858 | 468 |
| Income from subsidiaries | 1,132,413 | — | 307,032 | — |
| Total | 40,337,982 | 13,915 | 27,908,978 | 12,088 |

Increase in the Company's product sales in 2004 was attributable to the increase in product output as a result of the rise in feedstock throughput. In addition, the Company had stopped using the fuel boiler previously for internal use upon the operation of the circulating fluidized-bed (CFB) boiler. The Company also fine-tuned its resource allocation and explored production potential. The composite commercial yield for the year rose by 1.13 percentage points from 92.76% last year to 93.89%. The increase in composite commercial yield was equivalent to an increase of 182,400 tonnes of products.

As a profit-oriented enterprise, the Company had been actively improving its product mix. First, to enhance its light oil yield. The light oil yield for the year

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reached 74.73%, representing an increase of 2.83 percentage points from 71.90% of the previous year. Output of gasoline, kerosene and diesel for the year amounted to 2,754,200 tonnes, 1,300,200 tonnes and 6,644,500 tonnes respectively. Second, to adjust product mix in accordance with product price comparison. The Company strove to increase the output of its diesel, jet fuel, and controlled the output of gasoline at an appropriate level. The production ratio of diesel to gasoline for the year stood at 2.41. Third, to increase the output of upgraded products. Output of gasoline of high octane number (above #93) as a percentage to total gasoline output rose from 57.90% of the previous year to 71.94%. The output of #98 gasoline, which was produced by the Company the first time and meets the Euro III standard in terms of major quality indicators, was 9,800 tonnes. The Company also produced for the first time low sulphur diesel, with a sulphur content below 500 parts per million ("ppm"), for urban vehicle use. The output of this low sulphur diesel was 469,000 tonnes.

Capturing the opportunities arising from the booming period of the global petrochemical industry in 2004, the Company timely constructed a 450,000 tpa PX unit and 200,000 tpa PP unit, which commenced full operation during the entire year. Net sales from PX and PP reached RMB3,318 million, representing an increase of RMB2,933 million when compared to that of the previous year. At the same time, with the rise in market demand for chemical fertiliser in 2004, the average price of urea (including surcharge) for the year amounted to RMB1,357.80 per tonne, representing an increase of 19.31% from that of the previous year.

The Company continued to improve the quality of asphalt products. During the year, high-grade paving asphalt amounted to 621,900 tonnes, accounting for 94% of the total asphalt output. In 2004, the heavy traffic paving asphalt and Styrene Butadiene Styrene (SBS)-modified asphalt produced by the Company were successfully applied to the construction of world's highest standard Shanghai Formula One (F1) international racing circuit and the Company became one of the two suppliers of asphalt for the construction of F1 racing circuit listed by the Federation Internationale de L'Automobile.

Details of the Group's net sales by geographic region for the year are presented as follows:

| Geographic region | Net sales (RMB million) | Percentage share (%) |
|---|---|---|
| Domestic | 40,337 | 100.00 |
| Other countries and regions | — | — |
| Total | 40,337 | 100.00 |

### 3.3 Cost of sales

The Group's cost of sales for 2004 amounted to RMB36 billion, representing a 40% rise from that of the previous year. The main reason for the increased cost of sales was a hike in the price of feedstock. Cost of raw materials accounted for 92.66% of cost of sales.

In 2004, the crude oil price worldwide continued to rise to record high, while sea transportation expenses rose substantially when compared to that of the previous year. The Company fully exploited the advantage of strong sour crude oil processing capacity, and utilised large ports to increase the proportion of transportation by very large crude carriers (VLCC). The Company's average price of processed crude oil for the year increased by RMB446.22 per tonne or 24.97% from that of the previous year to RMB2,233.05 per tonne (about 36.94 $/bbl), which was 1.33 $/bbl lower than the average dated price (FOB) of Brent crude oil as assessed by Platts.

In 2004, the Company improved in lowering its cost of crude oil by processing 10,324,400 tonnes of sour crude oil, which represented an increase of 2,770,400 tonnes from that of the previous year and accounted for 63.96% of the total throughput.

In 2004, the Company's direct labour costs rose by RMB6,600,100 from that of the previous year to RMB86,312,300 due to increase in wages; power and fuel expenses rose by RMB40,508,000 from that of the previous year to RMB174,357,900 due to increase in prices and additional production facilities. In addition, owing to the operation of the new

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facilities, depreciation rose by RMB155,955,000 from that of the previous year to RMB944,787,200.

### 3.4 Expenses during the period

In 2004, the Group strengthened its control of various expenses during the period. Administrative expenses, selling expenses and net financing costs together increased only by 2.04% to RMB606 million when compared to that of the previous year. Increase in expenses during the period was smaller than the increase in feedstock throughput. On a year-on-year basis, administrative expenses rose by RMB18.86 million to RMB431.61 million, selling expenses increased by RMB1.48 million to RMB100.38 million and net financing costs dropped by RMB8.26 million to RMB73.65 million.

### 3.5 Profit attributable to shareholders

| | 2004 (RMB'000) | 2003 (RMB'000) | Change (%) |
|---|---|---|---|
| Earnings before interests, taxes, depreciation and amortisation ("EBITDA") | 4,862,070 | 2,528,144 | 92.32 |
| Earnings before interests and taxes ("EBIT") | 3,828,095 | 1,682,696 | 127.50 |
| Profit from ordinary activities before taxation | 3,765,434 | 1,609,594 | 133.94 |
| Income tax expenses | 1,152,075 | 521,565 | 120.89 |
| Profit attributable to shareholders | 2,613,288 | 1,087,987 | 140.19 |

In 2004, the Company's EBITDA was RMB4,862 million, representing an increase of 92.32% from that of the previous year. Depreciation and amortisation amounted to RMB1,034 million, representing an increase of 22.30% year on year. EBIT amounted to RMB3,828 million, representing an upsurge of 127.50% from that of the previous year. Owing to a relatively substantial increase in profits, EBIT/net sales rose from 6.03% to 9.49%. EBIT/interest expenses rose from 23.02 times to 61.09 times.

The Company's profit from ordinary activities before taxation for 2004 amounted to RMB3,765 million. Due to recycling of "three kinds of waste materials" and the use of domestic equipment in technical transformation projects, the Company enjoyed a preferential enterprise income tax policy and could therefore offset an enterprise income tax expense of RMB101.56 million (2003: RMB39.27 million). Profit attributable to shareholders amounted to RMB2,613 million, representing an increase of 140.19% from RMB1,088 million in 2003.

The Company's effective enterprise income tax rate in 2004 was 30.60%, representing a decrease of 1.80 percentage points.

## 4. ASSETS, LIABILITIES, SHAREHOLDERS' EQUITY AND CASH POSITION

### 4.1 Assets, liabilities, equity

As at 31 December 2004, the Company's total assets and shareholders' equity amounted to RMB15,493 million and RMB11,414 million respectively, representing increases of 14.86% and 23.67% respectively. Total liabilities declined by 4.24% from that of the previous year to RMB4,077 million. Gearing ratio (total liabilities/total assets) stood at 26.31%, which was lowered by 5.25 percentage points when compared to that of the previous year. Current ratio and quick ratio stood at 145.63% and 91.96% respectively. Returns on capital employed ("ROCE") was 26.49%. Return on net assets for the whole year was 25.32%. The Company's assets structure remained healthy, with satisfactory returns on capital.

**Assets, liabilities and shareholders' equity**

Unit: RMB'000

| | 2004 | 2003 | Changes |
|---|---|---|---|
| Current assets | 5,470,768 | 3,843,819 | 1,626,949 |
| Non-current assets | 10,022,011 | 9,644,766 | 377,245 |
| Total assets | 15,492,779 | 13,488,585 | 2,004,194 |
| Current liabilities | 3,756,668 | 3,447,090 | 309,578 |
| Non-current liabilities | 320,000 | 810,000 | -490,000 |
| Total liabilities | 4,076,668 | 4,257,090 | -180,422 |
| Minority interests | 2,351 | 2,350 | 1 |
| Shareholders' equity | 11,413,760 | 9,229,145 | 2,184,615 |
| Including: | | | |
| Share capital | 2,523,755 | 2,523,755 | — |
| Reserves | 6,404,120 | 4,857,325 | 1,546,795 |

Total assets increased by RMB2,004 million when compared to RMB13,489 million as at the end of 2003. Current assets amounted to RMB5,471 million, representing an increase of RMB1,627 million when compared to that as at the end of 2003. The increase in current assets was mainly due to an increase of RMB1,066 million in cash and cash equivalents. Non-current assets amounted to RMB10,022 million, representing an increase of RMB377 million when compared to that as at the end of 2003. The increase in non-current assets was primarily due to an increase of RMB347 million in fixed assets such as property, plant and equipment and construction in progress.

Total liabilities decreased by RMB180 million when compared with RMB4,257 million as at the end of 2003. Current liabilities amounted to RMB3,757 million, representing an increase of RMB310 million when compared with that as at the end of 2003. The increase in current liabilities was primarily due to an increase of RMB601 million in accounts payable, an

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increase of RMB162 million in tax payables, a decrease of RMB454 million in long-term borrowings due within one year. Non-current liabilities amounted to RMB320 million, representing a decrease of RMB490 million when compared with that as at the end of 2003.

Shareholders' equity increased by RMB2,185 million from RMB9,229 million as at the end of 2003. Of the shareholders' equity, reserves rose by RMB1,547 million.

As at 31 December 2004, the Group's gearing ratio was lowered from 31.56% for the same period last year to 26.31%, mainly due to realisation of relatively good profits and control of liabilities during the year.

### 4.2 Cash position

In 2004, the Group's primary source of capital came from operating activities, and the capital was mainly applied to operating expenses, capital expenditure and repayment of short-term and long-term loans. The net increase in cash and cash equivalents for the full year was RMB1,066 million, realising a good capital cycle.

**Cash flow in 2004**

Unit: RMB'000

| Principal items in cash flow statement | 2004 | 2003 | Change (%) |
|---|---|---|---|
| Net cash generated from operating activities | 3,623,805 | 2,503,958 | 44.72 |
| Net cash used in investing activities | -1,090,820 | -2,038,340 | -46.48 |
| Net cash used in financing activities | -1,466,969 | -162,455 | 803.00 |
| Net increase in cash and cash equivalents | 1,066,016 | 303,163 | 251.63 |

In 2004, the Company's net cash generated from operating activities was RMB3,624 million, representing an increase of RMB1,120 million or 44.72% year on year. The net cash generated from operating activities was mainly obtained from the realisation of a EBITDA of RMB4,862 million.

The Company's net cash used in investing activities in 2004 was RMB1,091 million, which was mainly applied to the expansion and construction of a 8 million tpa refining project, 450,000 tpa PX and disproportionation of aromatics sector project, 1 million tpa delayed coking unit.

The Company's net cash used in financing activities in 2004 was RMB1,467 million. Cash outflow from financing activities was mainly due to the repayment of due long-term loans of RMB884 million, the payment of dividends of RMB454 million, the payment of interest expense of RMB69 million during the year.

## 5. CAPITAL EXPENDITURE

Capital expenditure for the year 2004 reached RMB1,522 million, which was mainly used in the expansion and construction of a 8 million tpa refining project (the second stage), 450,000 tpa PX and disproportionation of aromatics sector and auxiliary facilities project, 1 million tpa delayed coking unit etc.

2005 is a critical year for the Company's construction of its 20 million tpa refining capacity expansion project. It is expected that the capital expenditure for the entire year will approximate RMB1,300 million. Major projects include 1 million tpa delayed coking unit, 1.5 million tpa integrated hydrocracking and hydro-generating unit, 100,000 tpa sulphur recovery unit, benzene extractive distillation project, upgrade of 2# and 3# berths, 120 tonnes per hour steaming unit for wastewater disposal.

## 6. HEALTH, SAFETY AND ENVIRONMENT ("HSE")

2004 was a year during which the Company saw a complete improvement in its HSE performance. The Company established the principle of harmonic relations between the environment and energy, persevering with sustainable development strategies and developing a recycling economy. It fully implemented clean production and pushed forward with the HSE management system, providing society with environmentally friendly products. The Company also realised the harmonic development between the economy and the environment and established an ecological enterprise. At the same time, the Company also showed concern for its staff's health as well as the co-existence and development in harmony with its surrounding communities. It made contribution to the realisation of a harmonic society. In April 2004, the Company was named as a model enterprise of petrochemical clean production in the PRC. In September, the Company was among the first eight companies in the country named as the "National Environmentally Friendly Enterprise".

In 2004, the Company enhanced safety assessment, pushed forward with the operation of its HSE management system. It had completed the safety assessment of the capacity expansion and upgrade project of the methyl tertiary-butyl ether (MTBE) unit. The Company also conducted risk assessment of completed units, facilities in operation on a regular basis, and carried out dynamic monitoring of important units and vital parts. To those problems found by the assessment, the Company implemented exhaustive tracking management to address hidden problems, with an aim to ensure safe and stable operation of production.

The Company continued to push forward with its environmental protection work. It persevered with sustainable development strategies based on scientific approach and strove to create a quality and clean working and living environment for its staff and society. During the year, all the various environmentally friendly indicators met the requirements of national environment protection laws and regulations and those of local governments. Its rate of meeting the standard of industrial wastewater discharge and the emission of industrial gases reached 100%. Fresh water used and wastewater discharged for processing each tonne of crude oil was 0.51 tonne and 0.12 tonne respectively, which were in line with international advanced standards.

The Company devoted to offering cleaner fuel to society. In 2004, the Company produced for the first time #98 high-standard clean gasoline that meets the Euro III standard in terms of major quality indicators and has a sulphur content controlled within 150 ppm. The Company also produced for the first time low sulphur diesel with a sulphur content below 500 ppm for urban vehicle use.