

## REFINING, SUPPLY & TRADING



SPC completed the additional refining capacity acquisition on 30 June 2004

### Refinery Performance

In 2004, global refining capacity was utilised close to its maximum sustainable rates, especially in the second half of the year. The average Singapore refining margin for 2004 was above US\$5.00 per barrel. The robust refining margins in 2004 were due mainly to the shortage of refinery capacity globally and the strong demand growth for light products. This resulted in record gasoline and distillates products prices compared to the underlying crude prices.

The Asia Pacific refined product prices in 2004 were very much influenced by the North Atlantic Basin refined product prices. During the United States (US) summer driving months, gasoline prices world-wide were driven up by the low US gasoline inventory. However competition for heating oils during the winter months between Europe and the US helped to push diesel prices to record levels. In Asia, high diesel prices were sustained by increased consumption as a result of a nuclear power plant incident in Japan and severe power shortage in China in the early half of the year. With the recovery of the aviation market and the seasonal demand for jet fuels for use as heating fuels during winter, prices of jet fuels continued to be high. The robust demand for refined petroleum products in 2004 resulted in strong refining margins for Asian oil refiners throughout the year.

SPC was able to take full advantage of the strong margins in 2004. The refinery's crude units and associated upgrading units were operated at levels close to its nameplate or designed refining capacity of 285,000 bpd. Given the complexity and sophistication of SRC, the refinery was able to capitalise on the sweet-sour crude price differentials to increase the margin spread. The average refinery throughput at SRC in 2004 was 260,000 bpd, approximately 13 per cent higher than the 2003 throughput. Following the successful acquisition of half of BP's one-third interest in the SRC joint venture in July 2004, SPC's share of the refinery output was raised to 142,500 bpd from July 2004.

### Clean Fuels

The implementation of clean fuels policy in Asia in line with the global trend to reduce environmental pollution had been delayed as the result of the 1997 Asian financial crisis. SPC needs to ensure that it will be able to meet future product specifications when more stringent Euro II, III and IV fuel specifications are introduced. SPC therefore plans to upgrade some of the existing refining facilities in SRC and install new units capable of producing cleaner gasoline and diesel fuels to meet Euro IV standards before the end of the decade. With the upgraded facilities, gasoline and diesel products will have a sulphur weight content below 50 ppm (parts per million) also in the case of gasoline, benzene of less than one volume per cent. In the Singapore market, SPC intends to be able to supply ULSD (ultra-low sulphur diesel) by the end of 2005.

## Challenges of Asia Pacific Clean Fuels Trend

Product specifications in the Asia Pacific marketplace are quite diverse with each country's clean fuels programme at a different stage of implementation. Generally, the Asia Pacific countries may be categorised in terms of the intensity of environmental fuel specifications, ranging from Category 1 to Category 4.

**Category 1** - Countries leading the way on the stringent Euro IV implementation that dictates one per cent benzene in gasoline and 50 ppm sulphur ULSD. Countries include Japan, South Korea, Hong Kong and Australia

**Category 2** - Countries in the process of phasing out Euro II specifications and are likely to move directly to Euro IV specifications within the 2005-2010 timeframe. Countries include Singapore, Taiwan and Thailand

**Category 3** - Countries starting environmental programme by phasing out leaded gasoline and restricting sulphur in diesel or even moving to Euro II specifications in some cases. Countries include China, Malaysia, Philippines, India, Indonesia and Vietnam

**Category 4** - Countries still using poor quality fuels. Countries include Pakistan, Bangladesh, Laos, and Cambodia

The trend towards cleaner gasoline and diesel fuels in Asia Pacific region poses a major challenge to an export orientated refinery. Large capital investments are required to upgrade existing facilities or to build new ancillary units. In addition, a more complex logistical supports is required to enable segregation and handling of different grades of refined products.

In view of the recent Singapore government announcement on cleaner fuels and the recommendation to enforce compliance to stricter specification of 50 ppm sulphur in diesel by October 2006, SPC and its partner in SRC will progressively reconfigure SRC into a clean fuel refinery.

In anticipation of more stringent gasoline specifications, SPC is currently working on a plan to produce one per cent benzene in gasoline before the end of the decade. An existing hydrotreating facility is capable of being upgraded to remove sulphur in gasoline to meet the Euro III and Euro IV sulphur specifications.

## Aviation Sales

Global air passenger traffic and cargo volumes recorded double-digit growth in 2004 compared with the previous year.

At Singapore Changi Airport the jet fuel volume was 75,900 bpd or 13.0 per cent higher than previous year. Market competition remained keen, especially for the new volumes generated by the budget airlines.

SPC's aviation sales recorded a volume of 14,800 bpd of jet fuel sales at Singapore Changi Airport. This was an increase of 13.8 per cent over the volume of 13,010 bpd in 2003.

As a pioneer in the aviation refuelling business in Singapore, SPC is reputed as an experienced and reliable supplier of quality jet fuel. Many of SPC's 27 airlines customers have been serviced by SPC since the commencement of their operations in and out of Singapore Changi Airport.

At Taipei's Chiang Kai Shek International Airport, SPC has a market share of approximately 16.4 per cent. Total jet fuel volume lifted by the carriers from SPC is about 1,600 bpd. This volume is about 2.4 per cent lower than 2003 due to the slower recovery of the market. SPC services five premium international airlines at this location.

At Hong Kong International Airport, SPC has a market share of 4.0 per cent or 3,400 bpd with a customer base of five airlines. Total volume at the Hong Kong airport recovered strongly in 2004 and exceeded the pre-SARS volume. SPC's volume increased sharply mainly due to robust air cargo demand and increased fuel liftings from its customers.

SPC completed a full year supply operations at Bangkok International Airport in 2004. Despite a marginal 1.4 per cent market share, SPC's jet fuel sales and operation activities in Bangkok was satisfactory. SPC currently services six airlines customers for Bangkok's international sector.

2005 will be another challenging year for the global airline industry. Major carriers are expected to streamline operations with more cost-cutting and consolidation to meet the competition posed by the increasing number of budget airlines. Freight traffic is nevertheless expected to remain strong given the projected increase in commercial activities and the increase in flight frequency of the budget airlines in Asia.



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1. SRC is ISO 9001 and ISO 14001 certified and consistently ranked in the top quartile of refiners in Asia Pacific
2. SPC maintains its competitive edge in bunkering and trading with its 220,000 cubic meter storage terminal at Pulau Sebarok

### Distillates

A key component of the downstream activities is the sale and trading of distillate products. Distillate products represent the lighter end of the refining process and include chemical naphtha, motor gasoline, catalytic spirit, kerosene (also known as jet fuel) and gas oil. Besides refined products from SRC, the Distillate Unit also sourced such refined products from other refineries and traders.

With SPC's enlarged refining capacity, the volume of distillate products available to the Unit has increased. This has enabled the Unit to capture a larger share of the demand for distillate products. The unprecedented demand for distillates during the year was the result of the global economic recovery and China's insatiable demand for energy.

Against this backdrop, the Distillate Unit traded and competed aggressively to capture market share. In 2004, the Distillate Unit achieved a turnover volume of 26.4 million barrels which was 70 per cent higher than the previous year. Distillate sales exceeded internal performance targets in 2004 due to close monitoring of the market and prudent management of inventories.

The Asia Pacific economies are expected to maintain the growth momentum seen in 2004. China's huge appetite for energy is expected to continue to fuel a strong demand for refined petroleum products. India is also fast emerging as a competitor to China for global energy resources as it too seeks to expand its economy. China and India's demand for petrochemical products, motor gasoline for cars, gas oil for engines, as well as continued strong demand for jet fuel will continue to provide support for SPC's distillates sale and trading activities in 2005.

### Residue

2004 was a challenging year for the Residue Unit. The unit's activities involve the sales of marine bunkering fuels and the sourcing and trading of fuel oil. Fuel oil prices in 2004 reflected much of the volatility that was seen in crude oil prices. During the course of the year, fuel oil prices increased by about 35 per cent from the level at the beginning of the year. The high prices for fuel oil both for bunkering and trading reflected the strong demand for this refined product. In 2004, the Residue Unit handled a volume of 23.9 million barrels of fuel oil both for trading and for ship bunkering. This was an increase of 13.1 per cent over 2003.

Fuel oil trading activities contributed positively to the profitability of the Residue Unit. The Unit was able to capitalise on the synergy provided by marine sales.

In 2004, despite extremely thin margins, fuel oil trading activities achieved internal performance targets. This good performance was achieved in the face of inventory stockpiling, high Asia-bound arbitrage movements and high freight costs.

Sales of marine bunkering fuel to vessels calling at the Singapore port was the other activity undertaken by the Residue Unit. Despite aggressive local, regional and international competition, Singapore was able to retain its status as the world's busiest port in terms of shipping tonnage, cargo tonnage and volume of bunkers sold.

In 2004, total vessel arrivals in terms of shipping tonnage stood at 1.04 billion gross tonnes, crossing the one billion mark for the first time in Singapore's history. This is a 5.7 per cent growth over 2003. Healthy annual growth rates of 15.9 percent and 13.1 per cent respectively were also recorded for container and cargo throughput. Singapore recorded container traffic at 21.3 million TEUs (Twenty-Foot Equivalent Units) in 2004, while cargo tonnage handled by the port reached a total of over 393 million tones. According to the Maritime and Port Authority of Singapore (MPA), Singapore also retained its position as the number one bunkering hub in the world by setting a new benchmark of 23.57 million metric tonnes sold in 2004, outstripping the previous 20.8 million metric tonnes record for 2003 by 13.3 per cent.

In 2004, MPA introduced a new regulatory framework to enhance shipper's confidence in the high standards of Singapore's bunker trade. The key requirement was the implementation of the new MPA Accreditation Scheme for bunker suppliers which included the Quality Management for Bunker Supply Chain (QMBS) compliance. QMBS required suppliers to provide full transparency of every link in the supply chain. SPC was awarded the QMBS certification and the MPA Accredited Supplier status in 2004, ahead of the mandatory enforcement by MPA on all bunker suppliers to meet such certification by May 2005.

Through its wholly owned subsidiary, Singapore Petroleum Co (Hong Kong) Ltd, the Residue Unit conducts offshore bunker trading and is active in other ports including Hong Kong and Taiwan and more recently in China. SPC has a representative office in London which provides support to the Singapore and Hong Kong offices for the bunkers business with European and American customers.

Over the years, SPC has built a reputation for itself in the bunker community. The Company will continue to maintain and strengthen SPC's enviable position in the marketplace. SPC will work closely with the authorities, shipping associations and training institutions to raise the level of professionalism in the industry and hence chart new directions for SPC's active participation in the trade.

### **Operations & Logistics**

Complementing Singapore's marine infrastructure is a seamless network of collateral logistics facilities such as distriparks and terminals and ancillary support services such as ship repair, insurance and legal services. Similar to this national set-up, SPC's RST business is supported by the Chartering/Marine and the Terminal Management units.

The Chartering/Marine Operations unit is responsible for providing logistics planning and support to SPC's business units, an essential function that reinforces the high regard that the international shipping community has placed on SPC as a quality supplier of refined products. The Company has constantly maintained its competitive edge in the bunkering and trading business with a Company-owned 220,000 cubic meter terminal on Pulau Sebarok for storage of fuel oil, gas oil and jet fuel. Pulau Sebarok Terminal (PST) offers deepwater jetties and full laboratory testing capability for all refined products carried. The deep water jetty is capable of accommodating tankers of up to 160,000 (DWT Dead Weight Tonnes).

### **Risk Management & Derivatives**

The Risk Management & Derivatives (RMD) Unit is responsible for the management of the Company's crude inventory and refining margins price risk.

In 2004, the Group increased the execution of over-the-counter and exchange trade oil derivatives as a result of the acquisition of BP's refining interest in SRC.

The trading environment is expected to remain challenging in 2005. The RMD Unit will continue to proactively fine tune its hedging strategies to better manage the Group's inventory and refining margins price risk. The Unit will manage these risks primarily through the use of over-the-counter financial derivatives which includes swaps and options.