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2003

## Environmental and Social Report





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## the company's mission and values

The dynamic growth of MOTOR OIL during its 31-year presence in the Greek market has been based on a set of principles and values, which continue to provide a sound foundation for all its business activities.





The company's **vision** is to establish itself as a leading oil refiner and oil products distributor in Greece and the eastern Mediterranean region.

Its corporate **mission** is to carry out its business activity so as to benefit all stakeholders - shareholders, personnel, clients, suppliers and associates, as well as the local and regional community - and to conduct its operations with due respect for people and the environment.

MOTOR OIL's vision and corporate mission are under-pinned by three basic **principles**:

- Respect for labour rights
- Respect for the environment
- Transparency

The realization of these principles is based on the following four company **values**:

- **Excellence** through efficacy in achieving defined objectives, by adding value for its shareholders and society in general, through top-quality servicing of client needs, by ensuring safety and health in the workplace, by protecting the environment and by promoting learning and innovation.
- **Responsibility** towards clients, personnel, associates and society.

- **Response** to sustainability and social responsibility issues, which means respect for people and their needs, the pursuit of sustainable growth, and promotion of the interests of the community in which the company operates.
- **Integrity**, which is demonstrated through compliance with all relevant laws and regulations, high standards of corporate governance, an honest and open communications policy and a responsible and consistent approach to dealing with all stakeholders.

This MOTOR OIL Environmental and Social Report describes the corporate social responsibility activities of the company, and of its subsidiary AVIN OIL, during 2003. It covers corporate policy and activities relating to human resource management, health and safety, quality, environmental protection and the company's role in the local community.



business practice. It is obvious that today's businesses - as members of the society in which they operate and because of their potential to influence the living conditions of those working for them or indirectly affected by their activities - should actively promote social cohesion and fund social programmes in the general public interest.

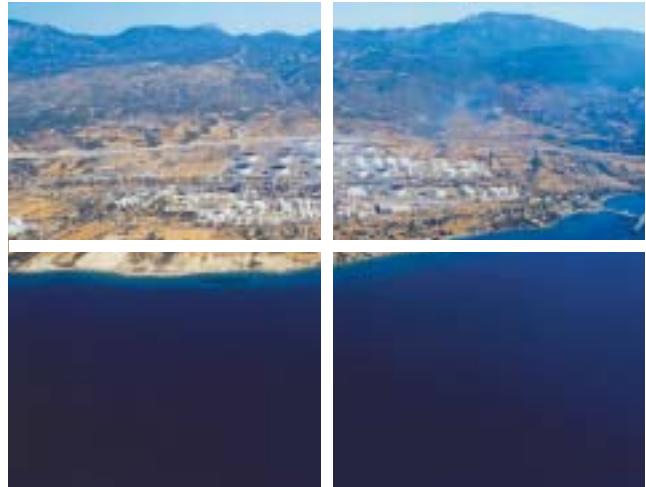
The principles and commitments associated with corporate social responsibility programmes are not merely about charitable donations and sponsorships aimed at promoting a corporate image. They are an extension of the commitment by businesses not only to fully comply with legislative requirements but also to act altruistically and ensure industrial development is conforming to the sustainable growth principles.

MOTOR OIL has been a founding member of the Greek Corporate Social Responsibility Network since 1999 and has adopted activities and programmes to develop its human resources, protect the environment and ensure the social well-being of the community in which it operates. Within this context, the key action points for businesses are the following:

- Development of human resources
- Health and safety in the workplace
- Environmental and natural resources management
- Cooperation with local communities
- Contribution to sustainable development

### **Commitment to corporate social responsibility**

Social responsibility, in the sense of initiatives by businesses to integrate community welfare and environmental protection into their commercial activities, was adopted by businesses in both the United States and the European Union many years prior to the development and establishment of the concept of Corporate Social Responsibility as a part of modern



Through its participation in the Greek Corporate Social Responsibility Network the company aims to contribute to the bolstering of social cohesion, to support social stability and to apply best practice in environmental protection so as to ensure sustainable development - that is, to satisfy its own needs without depleting resources for future generations.

This contribution is practically implemented through policies and actions related to the management of its own human resources, of quality, of occupational health and safety and of environmental protection. Furthermore, it is expressed through a variety of support activities, both to local communities and the society as a whole.

In other words, for MOTOR OIL, corporate social responsibility means giving satisfactory returns to its shareholders, ensuring the personal and professional development for its employees, satisfying the needs of its clients and functioning without compromising health and safety at work, environmental protection or the interests of society as a whole.

## the company

MOTOR OIL plays a leading role in the oil refining sector, supplying the region with a wide range of high-quality energy products. The company - with a consolidated income in 2003 representing approximately 1.3% of the Greece's GNP (the 2003 consolidated financial statements incorporate the results of MOTOR OIL, of AVIN OIL and of the Olympic Fuel Company) - has developed into one of the main pillars of the national economy and a leading player in the broader region. It owns 100% of AVIN OIL shares and has a 28% stake in Olympic Fuel Company and a 16% stake in Athens Airport Fuel Pipeline Company.





The company's refinery is located in Aghioi Theodoroi, Corinth, approximately 70km outside Athens. Together with the auxiliary facilities and the fuels offsites it is the biggest private industrial complex in Greece and is regarded as one of the most flexible refineries of southeast Europe. It processes crude oil of various types, producing a wide range of oil products which comply with the most rigid international specifications, thus serving major oil companies in Greece and abroad. Furthermore, MOTOR OIL is the only Greek company that produces base oils. Its head office is located in a modern building in Maroussi, a suburb north of Athens.

The company's investment programme for the three years 2003-2005 is estimated at around 400 million Euros. These investments will facilitate the production of "clean fuels" complying with the European Union specifications which become mandatory from 2005, and with the even stricter specifications applying in 2009. They will also allow increased production of middle distillates (diesel and kerosene) of which there is a shortage in Greece and in Europe. In addition, they will give the refinery greater flexibility and allow it to maximize production of either diesel or petrol, according to seasonal demand. Moreover, the refinery's environmental performance will be further improved and emissions significantly reduced. When the 2005 investment programme is complete, the Nelson Complexity Index (a measure of secondary conversion capacity in comparison to the primary distillation capacity) will be significantly increased from its current value of 8.75 to 11.94.

AVIN OIL, currently one of the largest oil products marketing companies in the Greek market, began operations in 1977 distributing lubricants of exclusive MOTOR OIL production. The first AVIN petrol station started operating in 1982 in Attica. Currently, the company runs a network of 575 controlled petrol stations throughout Greece and owns storage facilities for fuel products at Aghioi Theodoroi in Corinth. With MOTOR OIL as its main supplier, its sales activities encompass the following product categories: fuel for automobiles, industry, aviation and domestic heating; asphalt; liquefied petroleum gas; and lubricants. With sales in 2003 reaching 1,306,000 tons, generating an income of 542.4 million Euros and net profits before tax of 10.1 million Euros, AVIN OIL now holds 4th position in the Greek fuel market among the oil marketing companies.

Highlights of the MOTOR OIL's history, covering a period of steady expansion, are:

**1970-1972:** Refinery is built and begins operations. It has a crude oil distillation unit, base oils production unit, a pier for loading and unloading vessels and a gantry for loading road tankers.

**1975:** Expansion in fuels production by the addition of an atmospheric distillation unit.

**1978:** Construction of a naphtha reformer unit.



**1980:** Installation of a fluid catalytic cracking unit (FCC, for converting fuel oil to higher-value products).

**1984:** Construction of a power plant which runs on gas fuels. Surplus energy is sold to Public Power Corporation.

**1993:** ISO 9002 Certification for the company's activities.

**1996:** Purchase of 50% of the company's shares by Aramco Overseas Company BV, a wholly owned subsidiary of the Saudi Arabian Oil Company (Saudi Aramco), the world's biggest oil production company. Through this strategic alliance, the company has a reliable crude oil supply source and is now organized according to internationally accepted management standards. Relocation of head office in new modern facilities in Maroussi.

**2000:** Completion of the FCC unit modernization, allowing production of high-quality fuels conforming to current EU specifications. The Environmental Management System was ISO 14001:1996 certified the same year.

**2001:** Increase of the company's equity capital through flotation on the Athens stock exchange. Installation of a new gas turbine in the power production plant. Upgrade of the lubes vacuum distillation unit.

**2002:** Full acquisition of AVIN OIL.



**2003:** Start of construction of new facilities for producing "clean fuels" conforming to 2005/2009 specifications. Development of a Quality Management System which was certified compliant with ISO 9001:2000 in January 2003.

The continuous and dynamic growth of MOTOR OIL has contributed to the company's financial strength, to the establishment of modern corporate philosophy and has allowed it to attract and retain competent staff and management, thus enabling the company to perform its social role effectively, to enhance its contribution to society and guarantee its future growth prospects.

Growth is grounded on a firm but flexible business strategy based on the following three themes:

- Continuous upgrading of the refinery, in order to achieve the best possible financial performance.
- Presence in domestic, bunkering and international markets in a way that enables the company to achieve an optimum overall selling price.
- Implementing technical, operational and organizational improvements in the refinery so as to achieve the highest possible standards of health and safety, environmental protection and quality.

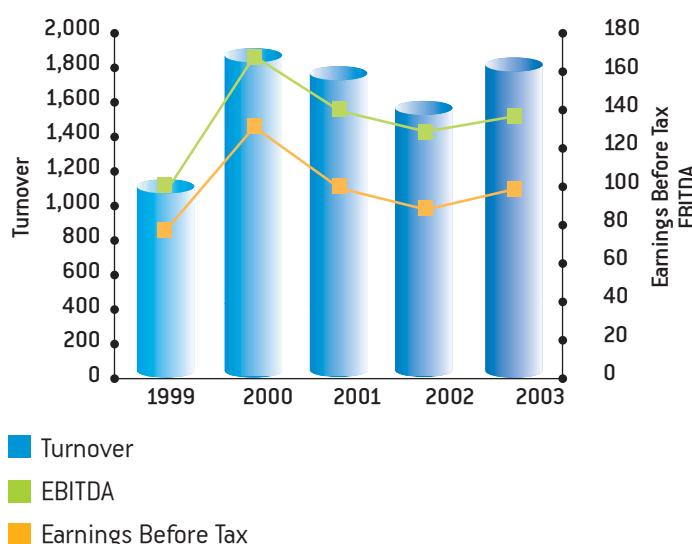


This successful strategy has resulted in the maintenance of high profitability.

The chart shows the progress of three main indicators of consolidated performance - turnover, EBITDA (earnings before interest, depreciation and tax) and earnings before tax. It should be noted that these figures not only reflect the company's performance but are also affected by external factors, such as the price of crude oil and oil products and the Euro/Dollar exchange rate.

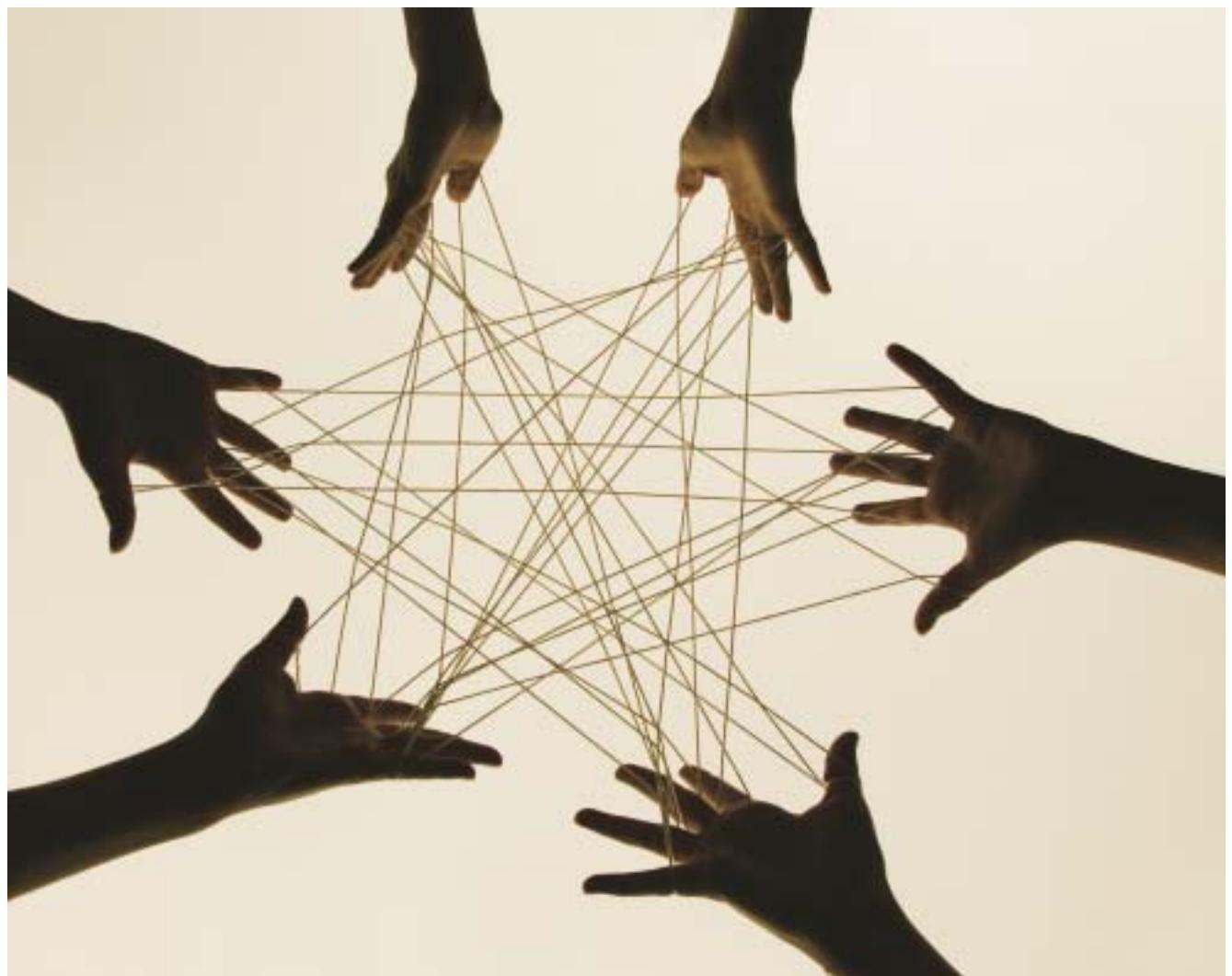
MOTOR OIL's economic contribution to society (discussed in a separate chapter) was in proportion to its financial performance. Indicative of this is the fact that, in the past two years, it has contributed income to the state budget, by way of taxes and other payments, in excess of 84 million Euros and has paid its personnel, in the form of net salaries and other benefits, over 76 million Euros. During the past three years, its contribution to public welfare projects and investments in environment protection is estimated at over 84 million Euros.

**Evolution of Key Consolidated Figures  
(million Euros)**



## economic benefits to society

The consistent growth of MOTOR OIL and AVIN OIL, combined with their overall size, represents a considerable contribution to society, which is reflected also in the "social product" they yield.



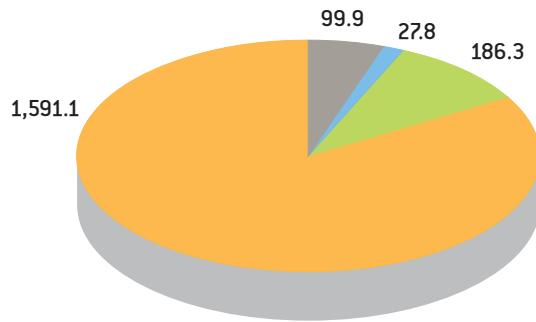
The two companies' economic benefit to the community is exceptionally important - a fact that is even more significant in an era in which the globalized economy and technological development, apart from the benefits they generate, also bring pressures to bear on social systems.

Total income from the two companies' economic activities in the year 2003 came to 1,905.1 million Euros, equivalent to approximately 1.3% of Greece's gross national product (GNP) for that year. Of this, 1,591.1 million Euros were utilized for the purchase of crude oil and products. Another 27.8 million Euros constituted depreciation. It should be noted that due to the nature of the two companies' activities (oil refining and marketing), expenditure on raw materials (crude oil) and merchandise accounts for 83.5% of total revenue. On the basis of the above data for 2003, the social product allocated to stakeholders

was 186.3 million Euros (171 million Euros in 2002).

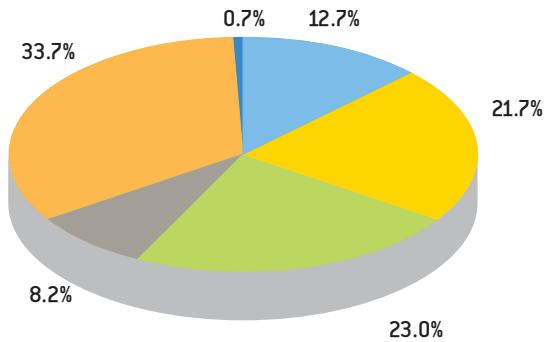
Social product can be termed that part of the company's income which is allocated to its stakeholders: that is, its personnel, the state, shareholders and the local community. Particularly, it refers to personnel expenditure and the provision of benefits to employees, over and above that required by legislation. It also refers to contributions to pension funds, income taxes paid, charitable donations and sponsorship, interest payments to credit institutions, dividend payments to shareholders and increases in company reserves. In a broader sense, the company's operational expenses also comprise a social product, since they generate income for other enterprises which in turn produce a social product in the sense stated above. A breakdown of social product for 2003 (excluding operating expenses) is shown in the diagram.

**2003 Income Distribution (All sources)  
(million Euros)**  
Total 2003: 1,905.1 million Euros  
(about 1.3% of the GNP)



- Raw & Trading Materials
- Operating Expenses
- Depreciation (for financing new investments)
- Social Product

**2003 Social Product Components  
Total 2003: 186.3 million Euros**



- Net Salaries & Other Staff Benefits
- State Revenues
- Pension Funds
- Shareholders/Banks
- Donations/Sponsorships
- Reserves/non Distributed Profits  
(for financing future growth investments)

## community involvement

As a responsible and active corporate citizen, MOTOR OIL attributes particular importance to fulfilling its role of significantly contributing to economic growth and promoting social cohesion in the area in which the refinery is located, as well as in the broader community.





In relation to its mission of social cohesion, the company continued, in 2003, its long tradition, based on its corporate aims and values, to support a wide range of cultural, athletic, social and philanthropic activities. This includes: financial contributions to education and science, donations and sponsorships for international sports meetings and athletics associations, donations to hospitals and church-run aid agencies, support for the work of non-governmental organizations and charitable institutions and, generally, assistance in addressing social needs.



- In 2002, a 1,600-capacity open-air theatre was inaugurated at Examilia, Corinth, named after renowned Greek composer Mikis Theodorakis. MOTOR OIL sponsored a concert by the Mikis Theodorakis Orchestra at the theatre in that year and, in 2003, undertook exclusive sponsorship for two more concerts by the orchestra. The two concerts that were held on the 28th of July (featuring "Axion Esti" and "Intellectual March") and 17th August (featuring "Arkadies") offered high quality entertainment to the thousand of spectators who attended them.

## Contribution to local society

- MOTOR OIL every year provides financial support for municipalities near the refinery site - Corinth, Loutraki, Aghioi Theodoroi, Saronikos and Solygia - for the organization of various cultural, social and sports activities.
- For over 25 years, MOTOR OIL has been a main patron of the "Vardinogiannis Foundation", based at the Panagia Kalyviani women's monastery in the Heraklion prefecture of Crete. Its operation is supervised by the monastery, within the framework of its charitable work. The foundation was set up and funded by the company's founder, Nikos Vardinogiannis, and its mission is the accommodation and social/professional rehabilitation of orphaned girls, who are trained in household tasks and, particularly, in the art of weaving.
- In 2003, the company made a financial contribution to heating expenses during the winter for a number of schools, churches and religious institutions in the neighbouring municipalities, as well as in the Athens area. It also contributed to heating expenses for municipal premises, and for the Corinth elderly people's home and orphanage. In addition, the refinery's canteen provides a daily lunch for residents of the elderly people's home.
- The company provides technical and financial support for various school programmes, or the programmes of other bodies.

The following are some examples of these activities in 2003:

- Sponsorship to the 6th Maroussi High School for the programme, "Environmental Education Unites Mediterranean Children," in collaboration with the



schools of Greek-language municipalities in Lower Italy (Castilliano de Greci, Coriliano di Otranto, Sternatia) and the University of Lecce. The aim of this collaboration was a cultural exchange based on common mores and customs and the same linguistic root of our common origin. The schoolchildren undertook a 10-day visit to Italy in April 2003, where they staged performances of "Antigone" by Sophocles - Brecht, and presented Greek traditional dances.

- Assistance for the environmental education programme "Water and Fountains" at the Aghioi Theodoroi High School, which was conducted under the aegis of the Aegean University and funded by the European Union. The company also financed the installation of a fire-safety system at the school.
- Financial aid to the 2nd Corinth Senior High School for its participation in the Socrates Comenius Programme (educational exchanges among schools in European Union countries).
- Financial assistance to the Corinth Museum of History and Folklore, for events celebrating the 10th anniversary of its educational programmes.
- The company boosts the market in the Corinth area through its policy of preferring the local businesses for the refinery's needs in consumables, food, etc., even though cheaper sources of supply exist elsewhere.

- Financial aid was given to the Aghioi Theodoroi elderly people's home, to sports clubs, cultural centers, school committees, church committees and institutions, community associations, drug rehabilitation programmes, etc. The company also financially supported events by various local associations and distributed Christmas gifts to schoolchildren in the area.
- In addition, the company supports the provision of higher healthcare standards in Greece through donations to hospitals for the purchase of medical equipment and devices. MOTOR OIL has fully equipped a clinic at the Crete University Hospital, and in 2001 donated medical equipment to the Corinth Hospital (including a cryogenic centrifuge, and an electrocardiograph). It has also provided financial assistance to the Aghia Sophia Hospital. In 2003, it donated to the Corinth General Hospital a state-of-the art blood transfusion device, mainly for use in the intensive care unit, but also in other cases where it is required. Moreover, in 2003, it funded the publication of an anti-smoking leaflet for that hospital.
- Company personnel are encouraged to participate in blood donation programmes, arranged in cooperation with the Corinth Hospital, for refinery employees, and with the Metaxa Hospital, for head office staff. These voluntary blood donations have been undertaken, as a humanitarian initiative, for 15 consecutive years. As a token of its appreciation, on May 28, 2003, the director



of Corinth Hospital blood donation department awarded commendatory certificates to 21 company employees, who had voluntarily donated blood more than five successive times.

- The company provides assistance to neighbouring communities in emergency situations, placing at their disposal the refinery's fire-fighting and medical equipment whenever necessary, as well as its personnel buses to meet the occasional transport needs of schools and sports clubs. During 2003, its medical equipment and buses were used a number of times. Fortunately, the fire-fighting equipment was not required, as it had been in 2000 when a fire broke out in Aghioi Thedoroi and MOTOR OIL provided significant assistance to the fire brigade. The Greek refineries' mutual assistance scheme was activated, whereby the nearby Hellenic Petroleum refinery provided temporary cover for MOTOR OIL while its own three fire-fighting vehicles assisted in extinguishing the fire.
- In cases of natural disasters, the company also offers a helping hand, which fortunately has not been required in the past few years. However, the "House of Creative Activity" - which it donated to the Ano Liossia municipality after the 1999 earthquake, to assist the stricken inhabitants - is still utilized for the creative occupation of young children in the West Attica area.



## Broader social contribution

MOTOR OIL's societal activities are not restricted only to the local communities, but also cover a wide range of other sectors.

These multifaceted activities continued in 2003, with a few examples mentioned below:

- The company's endeavours to support and promote education, research and technology, as well as related conference events, have been long-standing and consistent because it believes that they constitute the foundations for society's future and the driving force for progress.

- The Peloponnese University opened in 2002, with the aim of developing tertiary education in the Greek provinces, offering a high standard of studies, research and teaching, thus meeting the demands of a modern university with national, European and international prestige.

In 2003, the Corinth-based School of Social Sciences was inaugurated, housed in the municipality's newly-built cultural centre/theatre.

The furnishing of the building with an amphitheatre, library, classrooms, teachers' offices, computer room and laboratories depended on large donations by three organizations, one of which was MOTOR OIL.

- As in previous years, the company continued to support the "Vardinogiannis Foundation", which

awards scholarships for post-graduate studies to candidates from low-income families, who have distinguished themselves academically and who could not otherwise afford to continue their studies.

- Refinery visits for university, military academy and school students are organized annually with the aim of informing them about technical, commercial and career matters. More than 450 students visited the refinery in 2003.

- A large number of university students receive work experience training at the refinery or at MOTOR OIL's head office every year; in 2002, 120 students were involved.

- It sponsored the conference, "Oil and the Economy: International Developments and Repercussions on the Greek Market," which was held on April 11, 2003, in Athens. During the conference, a fruitful exchange of views took place among experts in the industry, both from the professional and the academic sectors. The company also sponsored a seminar organized by the University of La Verne (Athens Campus) in Athens, on December 13, 2003, on the topic, "Managing Across Cultures." The seminar was presented and coordinated by Professor R.D. Lewis, a world-renowned expert on communications issues and cross-cultural management. In previous years, it had supported various international and national



conference events, such as the 3rd International Conference on Air Pollution in Urban Centres (Institute of Physics, Loutraki, 2001).

- MOTOR OIL sponsored publication of the book, "General Shipping", by retired Vice-Admiral I. Economopoulos, the fourth in a series dealing with maritime matters.
- Collaboration with a variety of educational institutions, developed in previous years, continued in 2003, either with research grants, or covering the costs of conducting studies relating to the activity of its refinery (universities of Athens, Piraeus, Patras and Crete).
- MOTOR OIL offers support for activities promoting the spirit of athleticism. With the return of the Olympic Games, in 2004, to its birthplace, this support acquired special significance in 2003. Some examples of this include:

- The company is the main sponsor of the international sports meeting, known as the "Vardinogianneia", held every year in Rethymnon, Crete, in honour of the memory of Pavlos Vardinogiannis.

Held under the aegis of the European Athletics Association (EAA), this meeting observes the International Association of Athletics Federations (IAAF) rules. Major Greek and foreign athletics champions have competed in the games and 24 national records have

been established. At the 2001 meeting, Cuban javelin thrower Menendez set a new world record, while in 2002, in the 400m men's race - in which top international athletes competed - the world record was broken. Because of the wide participation, the outstanding performances and the excellent organization, in 2002 and 2003 the "Vardinogianneia" were declared the best European sports meeting, with the highest IAAF ratings.

Some 200 athletes from 30 countries competed in the 19th "Vardinogianneia", including Olympic and world champions, such as Svetlana Feofanova (a leading pole-vaulter), Bernard Williams (third place in the 100m at the World Championship), and Gregory Hutton (Olympic bronze medallist in the 400m event). The Greek athletes included Meletoglou, Tambaki, Rentoumi, Tsikouna, Vongoli, etc.

There were great performances, with the finest being that of Stephen Holm in the high jump (2.34m, the world's best for 2003).

- On April 11-13, 2003, organized by the Atromitos Union of Rethymno and sponsored by MOTOR OIL, the IAAF (International Association of Athletics Federations) held elections for a new board, with the participation of 167 delegates from all European countries. This was followed by the IAAF's 58th Calendar Conference - also sponsored by MOTOR OIL - on October 22-26 in Rethymno, with the participation of 574 delegates from countries with a high standard of athletics.



- In 2003, the company supported the Rethymno Volleyball team, the Heraklion Sports Club, and the football team of Episkopi (Rethymno).

A donation was also made to the Lambi municipality in the Rethymno prefecture, for the purchase of land to build an athletics centre.

- MOTOR OIL was a Golden Sponsor of the Greek Olympic Team for the Disabled at the Sydney Paralympics, and is a regular sponsor of the Greek Special Olympics teams. In 2003, it sponsored five athletes from the Greek team for the games held in Ireland.

- Each year, MOTOR OIL supports the "Spartathlon" athletics event. In 2003, the 21st event was held on

September 26-27, with the 230 athletes competing from all over the world.

As always, the historic 246km Athens-Sparta route is followed - the same that the messenger of the Athenians, Pheidippides, ran in 490 B.C., to summon help from the Spartans against the Persians at the battle of Marathon.

- MOTOR OIL is a firm believer in the role of art and culture as a requisite component of healthy social development, based on solid cultural foundations. For this reason, it provides multifaceted support for activities within this context.

- In 2003, the company linked its name to the construction of a great cultural project in Athens,



by becoming a Golden Sponsor of the Halandri Cultural and Athletics Centre.

The centre boasts a 550-seat multi-space facility, which can host events of all kinds (theatrical, musical, conferences, art exhibitions, etc.) plus a 300-seat, world-class indoor gymnasium for basketball and volleyball matches, wrestling, and artistic gymnastics. It also features an indoor, Olympic-size, heated swimming pool, as well as areas for meetings and receptions.

The aims of the body managing the centre are the development of culture and athletics, the promotion of young artists and the creation of a scholarship for disadvantaged, but gifted, Greek pupils.

- The company supported the creation of an archive-museum of old maps and etchings.

- MOTOR OIL supports cultural and other events organized by the Elpida Association of Friends of

Children with Cancer; for example, it was a Golden Sponsor of the concert given at the Herod Atticus theatre by the internationally-renowned composer Jean Michel Jarre.

Elpida's aim was to collect money for the construction of the Oncology Hospital for Children, for the new Acropolis museum, and for the Melina Merkouri foundation which works for the return of the Parthenon (Elgin) marbles to Athens.

- Since 1971, MOTOR OIL has been the main publisher of the magazine "OIL".

Featuring high-standard articles on historical, sociological, religious, energy, environmental, scientific and technological topics, and promoting important company activities with a broad public impact, the magazine is read by a significant number of both public and private organizations, as well as higher educational institutions.

## human resources

At MOTOR OIL, and at its subsidiary AVIN OIL, the management of human resources is linked to compliance with legislation in force and with established principles of human and employment rights. Fundamental to the two companies' human resources policy is the respect for these principles as they apply to their workforce, given that this is a resource of inestimable value, on which the success of the companies' development depends and which represents an essential factor determining their ability to compete in a globalized and technically advanced environment.





Their ability to operate and the quality of their products and services is determined by the efficiency of the workforce and the quality of the working environment. Systematic efforts continue to be made to improve working conditions and to provide an environment in which employees can pursue personal development and achieve their full potential.

In this context, operating progressive policies on equal opportunity and training, for example, and giving priority to the welfare of employees and their families is seen as business priority for the two companies.

## **Equal opportunities policy**

All aspects of human resource management, including recruitment, transfers, promotion, remuneration and education and training, are subject to equal opportunity principles and the avoidance of any form of discrimination.

The companies respect the dignity and diverse cultural backgrounds of the workforce and aim to act transparently and in a meritocratic way and to ensure that:

- The composition of management reflects the composition of the workforce as a whole.
- Education and training programmes are open to all staff, subject to operational requirements being met.
- Benefits and welfare provisions support employees and their families and help them maintain a healthy work/life balance.

## **Labour relations**

Labour relations have been particularly good at both MOTOR OIL and AVIN OIL because they have been developed not only in response to legal requirements but also on the basis of mutual trust and cooperation and as a result of management's progressive human resources management policy which enshrines clarity and fairness in matters of recruitment, transfers, promotion, remuneration, education/training, holidays and leave.

A reflection of the harmonious state of industrial relations is the fact that there have been no strikes in recent years. Terms and conditions of employment are covered by a company collective labour agreement, approved by the Ministry of Labour, which has been in place since September 1974. Refinery employees have their own union which since 1986 has signed a national collective labour agreement with the Federation of Greek Industries. This agreement lays down minimum pay levels and terms of employment in the refinery and is supplemented by an annual local agreement between the company and the union. The local agreement covers matters such as attendance bonuses and other allowances paid according to the extent of employees' family responsibilities, for example the number of children, costs of children's schooling, and maternity or bereavement leave.

## Composition of the workforce

MOTOR OIL is one of the biggest employers in Greece. In 2003, 890 of the company's 1,078 employees were based at its main site, the refinery in Aghioi Theodoroi, Corinth (the remaining 188 are based at the company's head office in Maroussi).

About half the refinery personnel live in the area of Aghioi Theodoroi, where MOTOR OIL is the biggest employer.

AVIN OIL, by comparison, employed 202 people in 2003. Besides employees directly employed by the two companies, it should be noted that a significant number of people are indirectly employed through sub-contractors.

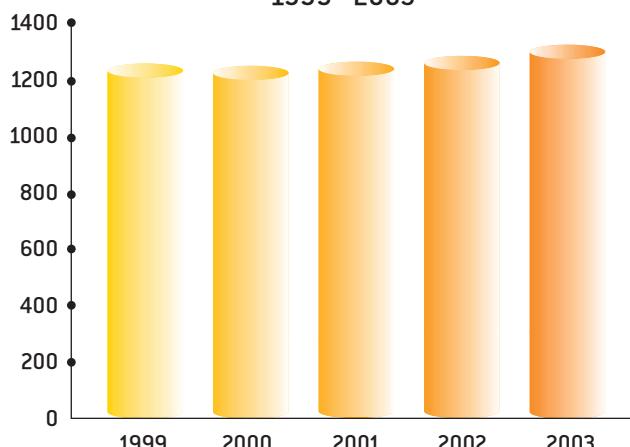
Staffing levels within the two companies remained virtually constant in recent years despite new investments in refinery automation.

The significant rise in the total number employed in 2003 reflects an increase in staff required in order to implement the investment programme associated with "clean fuels" specifications coming into force in 2005.

Considerable efforts are made to avoid excluding disadvantaged groups, such as the disabled, from the workforce.

Both companies subscribe to the principle that disabled people should not be discriminated against in employment, education or professional development and, in 2003, 12 individuals with special needs were employed.

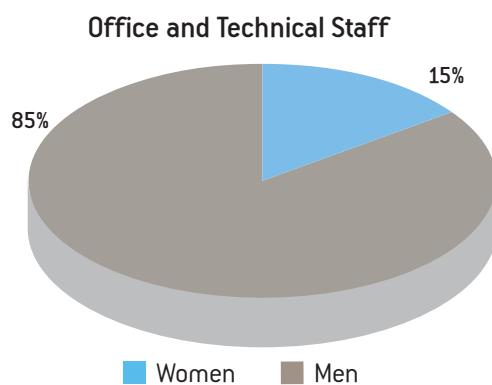
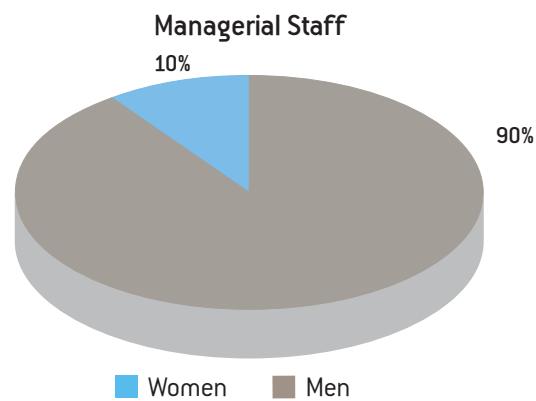
**Evolution of MOTOR OIL's and AVIN OIL's Staff Numbers 1999 - 2003**



## Gender equality

The two companies do not discriminate on grounds of gender, although the nature of most refinery jobs means that few are taken by women.

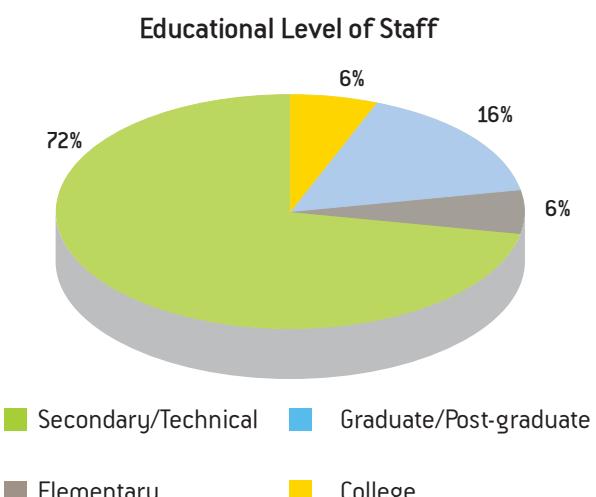
Overall, in 2003, across both companies, 14.5% of the workforce was female, rising to 36.5% in head office staff. Among senior management, women make up 10% of the total, 15% in other management and technical grades.



## Educational level of the workforce

MOTOR OIL and AVIN OIL attach considerable importance to the educational level of their employees, aiming to attract those with high-level qualifications and encouraging existing staff to follow courses leading to recognized qualifications.

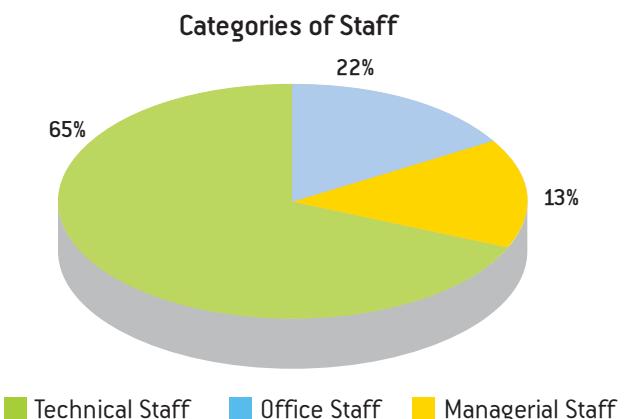
Approximately 22% of the workforce hold graduate or post-graduate academic qualifications.



## Management, technical and administrative staff

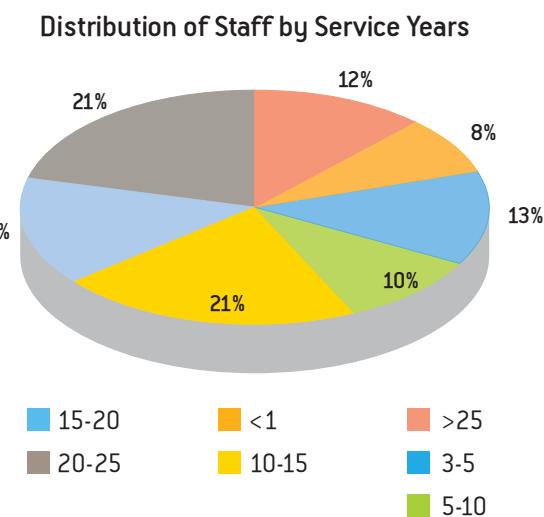
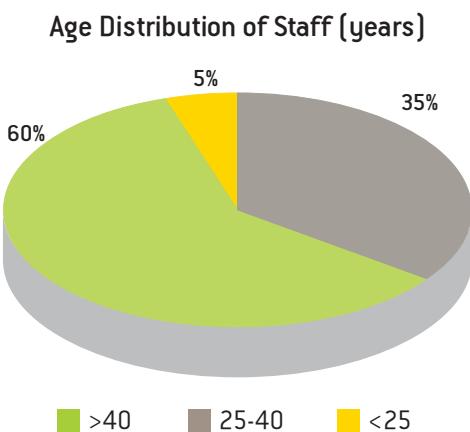
In 2003, across the two companies, senior management grades made up 13% of the total workforce while technician and administrative staff accounted for 87% of the total.

It is an indication of MOTOR OIL's responsible policy on staffing that the majority of workers on the refinery site are full-time employees.



## Age profile of the workforce and staff turnover

The average age of the companies' employees in 2003 was 42.5 years, while 40% of the two companies' workforce was aged less than 40 (as indicated in the charts).



As far as length of service is concerned, the average seniority was 14.9 years, reflecting the low level of staff turnover. Some 52% of all employees have less than 15 years service.

Recruitment is carried out in accordance with procedures compatible with the two companies' policies, without any discrimination on grounds of gender, while giving preference to individuals with knowledge of new technologies.

At the refinery, inexperienced young people are trained so as to be able to satisfy the company's requirements for specialist skills.

<b>HIRINGS</b>			
	<b>2001</b>	<b>2002</b>	<b>2003</b>
New Hirings	40	38	101
<b>REASONS FOR LEAVING</b>			
	<b>2001</b>	<b>2002</b>	<b>2003</b>
Retirement	23	25	25
Resignation	9	8	14
Other	7	7	3
Total	39	40	42
<b>STAFF MOBILITY*</b>			
	<b>2001</b>	<b>2002</b>	<b>2003</b>
	3.2	3.3	3.3

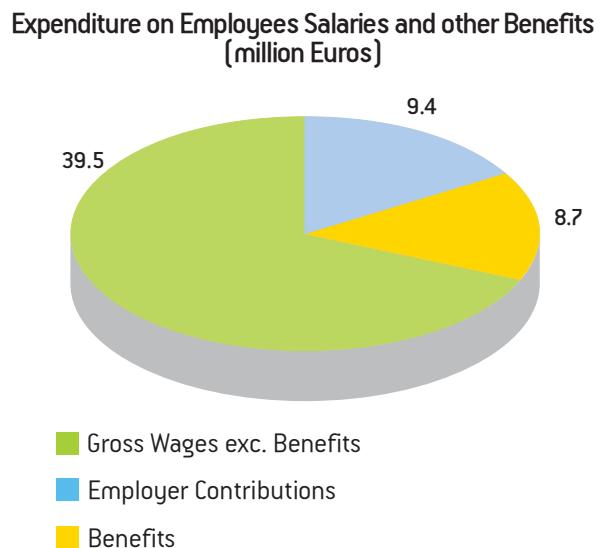
\*Staff turnover index=  $\frac{\text{Number of staff leaving}}{\text{Average staff number}} \times 100$

In 2003, MOTOR OIL and AVIN OIL recruited 101 new employees (more than double the level of previous years) while 42 people left the company for various reasons. As already mentioned, the resulting increase in total staffing level reflects increased labour requirements associated with the upgrading of the refinery.

## Salaries

Total MOTOR OIL and AVIN OIL personnel expenditure during 2003 amounted to 57.6 million. This includes the costs of both regular and overtime working, employer's contributions to various social insurance organizations and additional employee benefits.

There is a remarkably low level of staff turnover within the companies (3.3%), reflecting the good relations between management and other grades and the establishment of long-term relationships between the company and its employees. In recent years the level of staff turnover was even lower.



Additional benefits are offered by the two companies to its personnel so as to foster long-term relationships (e.g. a "long-service bonus") and to reward regular attendance (e.g. an "attendance bonus" available to refinery employees). Every employee who completes five years employment with the company receives an additional leave bonus, while those who complete 10 years receive an additional Easter bonus. This means that the employee with 10 years employment with the company receives the equivalent of 15 months pay each year.

None of the two companies' employees earn less than the legal minimum wage. The lowest monthly salary in the company in 2003 was 700 Euros as opposed to the minimum required by law which is 582 Euros for operatives and 520 Euros for white-collar staff.

Annual salary increments, as a rule, exceed the Average Consumer Price Index (CPI), as shown in the diagram of payroll cost in comparison with the average CPI.





## Other benefits

MOTOR OIL and AVIN OIL, in their efforts to provide the best and most flexible benefits for their employees, introduced a group insurance plan in 2002 which provides employees with valuable financial support in cases of a medical or financial emergency.

The entire cost of the plan, which covers spouses and dependants as well as employees, is covered by the companies. The group insurance policy provides compensation in the following cases:

- Loss of life caused by illness or accident
- Permanent total disability caused by illness or accident
- Permanent partial disability caused by accident
- Loss of earning capacity caused by illness or accident
- Hospital care
- Maternity (childbirth allowance)

Employees are benefiting from a private pension plan which pays out a lump sum to those retiring (either early or at normal retirement age) or becoming disabled.

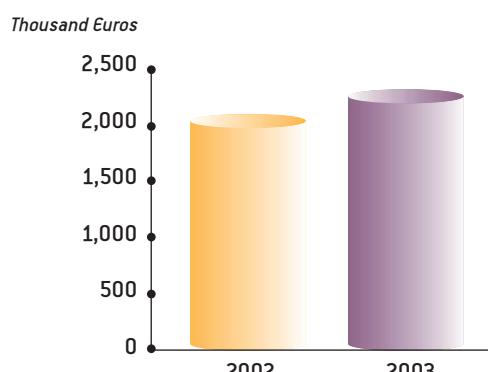
The cost of these provisions is paid entirely by the two companies.

Other benefits offered to employees and their families include a variety of activities which aim to strengthen relations with the company, cultivate team spirit and help employees achieve a healthy work/life balance.

The main activities during 2003 were:

- Operation of the refinery canteen
- Excursions
- Provision of loans to cover emergencies
- Wedding allowance
- Special leave arrangements covering bereavement, childcare needs, etc.
- Christmas parties for employees' children
- "Name-day" gifts
- Transportation of employees to work by bus
- Financial support of the employees' football team
- Special benefits for the refinery personnel (85 performance awards given to secondary school children, 91 educational grants to university students, participation in summer camps for 100 children, 54 long-service awards, etc).

### Expenditure on Social Programmes for Employees and their Families





The MOTOR OIL (HELLAS) football team has competed for 12 consecutive years in the local employers' football league, achieving several major trophies.

In 2003, during the 15th world tournament for company athletics held for the first time in Thessaloniki, the MOTOR OIL team was unbeaten in the football competition, winning the gold medal, the first such victory by a Greek side in 15 years of the event.

## Training

The development of employee skills, through individual training as well as professional group training, is a matter of strategic importance.

The growth strategy of the two companies requires matching training with business objectives.

This is achieved by investing in the improvement and development of staff skills.

Thus, personnel participate in in-company training seminars as well as other seminars and conferences held in Greece and abroad; they are encouraged to follow foreign language courses and are supported financially in this; both the head office and the refinery have libraries for employee use; and the company pays for magazine subscriptions and professional society membership fees.

The companies' training policy aims to ensure that each employee's knowledge and skills match their job function; this is to be achieved through continuous, flexible and comprehensive vocational training and personal development.

Dedicated in-house training facilities, equipped with state-of-the-art IT and presentation systems, are available at the refinery and at the head office.

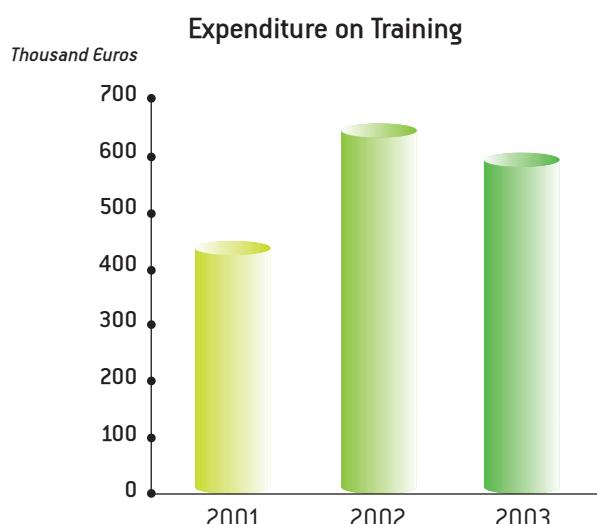
A particularly comprehensive induction training programme has been developed for newly recruited refinery operatives.

Encompassing both theory and practice, this aims to ensure both that all refinery personnel are competent and that they adopt safe working practices appropriate to the working environment which is both demanding and potentially hazardous.

This programme lasts approximately 9.5 months and is conducted at the refinery by engineers and operators from the various refinery units, depending on the new employee's position.

The time schedule and the subjects of the introductory programme are:

- Two-month training on general subjects (health and safety, environment, fire protection, quality, first aid, petroleum products, refining, maintenance, English, computers, etc.).
- One and a half months of part-time training tailored to the individual's particular occupation.
- Six-month "practice" shift-working (without the assumption of operational responsibilities).



During 2003, 350 employees participated in training programmes (96 managers and 254 other grades), equivalent to 29 hours of tuition per person.

The total training man-hours were 10,248 corresponding to 29 man-hours per year per person participating in the training programmes.

The total cost was 574 thousand Euros. Both companies are subject to a 0.45%-of-payroll levy administered by the state employment and training body OAED which applies to all Greek employers.

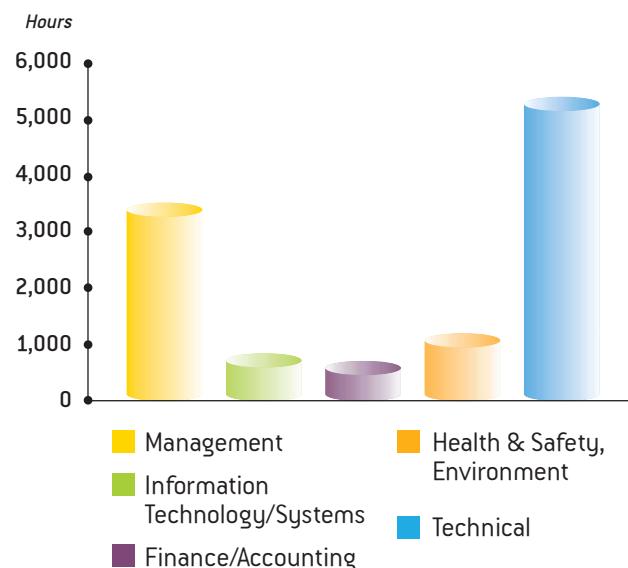


The companies also sponsor employees following tertiary or post-graduate educational courses and, in 2003, eight benefited from such funding, (one post-graduate course in marketing, two participations in the post-graduate management course of the Hellenic Management Association and five courses on marketing, economics and administration staff studies; furthermore the foreign languages tuitions for four employees were covered).

Most training activities carried out during 2003 were concerned with technical, management and health and safety and environmental protection matters in accordance to the core activities of the two companies.

The charts describe the subjects of the 2003 training programmes, showing the equivalent training man-hours per subject, as well as the progression of the training costs during the last three years.

**Training Man-hours by Subject**  
2003 Total Training Hours= 10,248



## quality

Since the start of its operations, MOTOR OIL has focused its efforts on the production of quality products, aiming to satisfy the customers' needs and supplying them with reliable, high-quality products.

This objective is achieved through full commitment of management and staff and the application of preventive management procedures which allow potential problems to be pre-empted and dealt with.





To this end, since 1992, the planning and development of a Quality Management System covering all activities has been developed according to the principles of ISO 9002, for which MOTOR OIL was certified in December 1993.

Aiming at even higher quality standards and to strengthen the companies' competitive quality advantage, essential for the achievement of its business objectives, it was decided to proceed to certification according to the new, stricter ISO 9001:2000 standard.

The laborious internal process of upgrading the existing quality management system was carried out in 2002 and this was certified, according to the ISO 9001:2000, by Bureau Veritas Quality International (BVQI) in January 2003.

Within the framework of this effort, an Integrated Management System has been designed through which:

- Measurable quality objectives align with other business objectives.
- Procedures to implement and ensure its effectiveness have been established.
- Measures to ensure continuous improvement of the quality system are in place.

Both management and employees are fully committed to the quality policy, which is enshrined in the following two statements:

- MOTOR OIL will produce and sell products that satisfy

its customers, always taking under consideration the stakeholders' interests.

- MOTOR OIL focuses on its customers, examines and evaluates their requirements and applies all necessary technologies and actions, in order to avoid compromises in quality matters and constantly improve the effectiveness of the Quality Management System. Quality is everyone's business.

AVIN OIL supplies high quality fuels for automobiles, aviation and industry, asphalt and liquefied gas, plus lubricants that meet international technical specifications (API, SAE, CCMC and ACEA) as well as the requirements of major automobile manufacturers. Strict management procedures are applied to fuel distribution throughout the three stages of fuel delivery: from the loading points (company installations and refineries), to the transport vehicles (tanker trucks), and to the final delivery points (petrol stations, factories, etc.) in order to ensure both safe transportation and quality for the final consumer. For its network of petrol stations, the company began in 2000 a quality campaign based on a Quality Competition, conducted by a specialized research company, with the aim of further improving the image of AVIN's petrol stations and the standard of customer service.

## health and safety - environment

It is a principal aim of MOTOR OIL and AVIN OIL to maintain, in their commercial operations, healthy and safe working conditions for their employees, and for non-employees with whom they collaborate, to maintain high standards of environmental protection and to ensure a high quality of life for those living in the vicinity of their industrial facilities.

MOTOR OIL places particular emphasis on its health and safety management and environmental protection policies and to the constant improvement of its performance in these areas. These policies are being implemented through the introduction of its *Environmental Management* and *Health and Safety Management Systems*.





## Health, Safety and Environment Policy

MOTOR OIL operates with due respect for health and safety and protection of the environment.

To that end, the company aims to:

- Set goals compatible with continuous improvement of its health, safety and environmental management systems.
- Comply with, or to exceed, the requirements of all relevant legal or equivalent requirements.
- Produce high-quality products, conforming to up-to-date environmental standards, through the efficient use of raw materials, energy and technology.
- Record its performance, good or bad, and thus help promote the notion of socially responsible business and of the responsibility of enterprises.
- Maintain emergency action plans which are regularly rehearsed.

- Operate a coherent Integrated Management System that takes account of health, safety and environmental protection factors when business or operational decisions are being made, plans drawn up, etc.
- Offer advice, information and training, to its own employees and to those of sub-contractors and others working on its premises so as to ensure their commitment and vigilance to safe work practices.
- Reduce waste production and atmospheric emissions to the lowest level possible.
- Co-operate with all interested parties to further develop its health, safety and environmental management systems.

At MOTOR OIL, whatever we aspire to achieve, plan or do, we do it:

- safely,
- without risk to the environment, and
- in an economically acceptable way.

## Health and Safety

MOTOR OIL's Health, Safety, and Environment Policy makes clear that safety is an integral part of the company's management system and a primary concern of its management. The aims of the policy are to:

- Minimize the risk of major accidents to the lowest level possible.
- Eliminate occupational accidents.

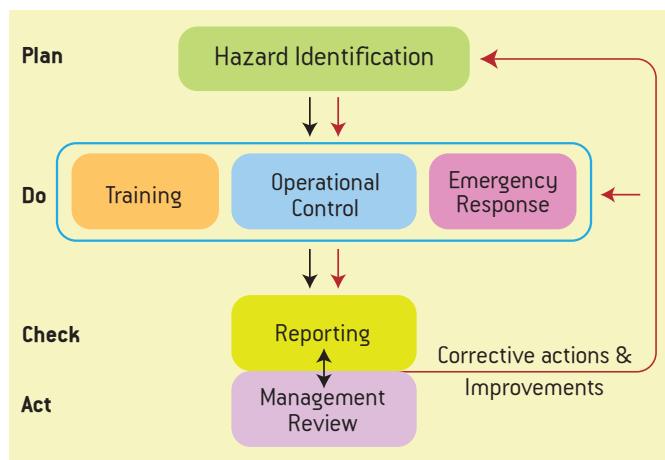
- Achieve continuous improvement in working conditions.
- Ensure that all employees (including sub-contractors' employees), the local community, the environment and the company's own installations are protected from any dangers that may arise from its activities.

In order to achieve these aims, a new, comprehensive *Health and Safety Management System* came into operation in 2003.

The management system, based on best practice elements

of other internationally recognized management systems, was developed by MOTOR OIL's own specialists.

The system is framed around the four-stage procedure illustrated in the flow diagram.



The four stages **Plan** → **Do** → **Check** → **Act** comprise a management cycle which operates as a self-checking and self-correcting mechanism designed to ensure continuous improvements in the system's operation.

The first stage - **Plan** - includes hazard identification procedures. Risks are assessed for each workplace, the necessary preventive measures are recorded and the appropriate plan of work determined.

The next stage - **Do** - has three parts of equal importance: training, safe working rules and audit procedures and emergency response. Mandatory training in safe working is laid down for operators, linking with operational rules to

be followed and, thirdly, procedures for dealing with unsafe and emergency situations are laid down.

The next stage - **Check** - covers record-keeping and auditing. The results of safety checks and internal inspections are recorded, confirming compliance with rules and regulations, determining performance against targets and the nature and effectiveness of preventive measures taken, and providing management with appropriate data on safety management performance.

The cycle is completed by the final stage - **Act**. This involves corrections to safety arrangements being made by management according to the extent to which safety performance targets are being met.

The main components of the Health and Safety Management System can be summarized as follows:

- Strict compliance with relevant legislation, with international standards and codes of practice and with established operational rules.

The refinery was designed and built, and operates, in accordance with Greek and foreign regulations and standards. Moreover, there is a continuing program of investment in technical upgrades, taking account of engineering developments, aimed at maintaining the highest possible standards of safety and accident prevention.

- Systematic identification, control and assessment of all risks



associated with the hazards arising from the refinery's operations.

- Provision of training to all workers covering: information and instruction relevant to the hazards arising from their work, correct use of personal protective equipment, safe working practices, appropriate emergency response procedures and first aid.
- Ensuring enforcement of safety rules in all situations, including the use of protective equipment were necessary and compliance with safe working procedures.
- The development of an *Emergency Response Plan* through the consolidation of previous emergency procedures. The plan prescribes equipment, organization and facilities available (both internally and from off-site sources) to mitigate the effects of an emergency. Arrangements related to the Emergency Response Plan are:

- A Mutual Aid Agreement, dating from 1988, whereby all Greek refineries co-operate in the event of an emergency. The effectiveness of this collaboration is ensured through six-monthly joint exercises involving MOTOR OIL, the local fire brigade and the other refineries.

- Safety drills, organized weekly, and preparedness exercises concerned with the consequences of major accidents which take place several times a year. During these exercises, the major incident reaction procedure is activated and all relevant public services are involved.

- Fixed and portable equipment for fire detection and fire-fighting and the detection of leakages.

- The continuous availability on the refinery site of five fire engines and one foam-generating road tanker, operated by trained fire-fighters.

- The systematic recording, investigation and analysis of accidents, near-misses and fires with a view to effecting corrective measures to prevent repetitions.
- The active involvement of all workers in health and safety arrangements, both individually and through their being represented on the health and safety committee.
- The continuous monitoring of equipment and workplaces for potential risks through the regular health and safety inspection programmes involving both internal inspection teams and external (Greek and foreign) safety specialists. The internal inspections are carried out on an annual basis by teams consisting of refinery personnel. Recommendations arising from these audits lead to appropriate technical and/or organizational measures being taken to achieve long-term improvements in working conditions.
- Excellent cooperation with the public authorities, including the provision to them of all relevant information.
- Six-monthly joint conferences on health, safety and environmental protection, involving representatives of Greek and Cypriot oil refineries and public authorities. In 2003, the 22nd and 23rd such meetings were held.
- The availability of three fully-equipped ambulances. At the same time, the refinery has a fully equipped medical centre staffed by an occupational physician and nursing staff, while the alkylation unit also has a medical station.



Refinery workers are routinely medically examined (blood tests, X-rays, cardiograms, eye tests, etc.).

A medical centre, staffed by two doctors, is also available for MOTOR OIL and AVIN OIL staff at the company's head office premises.

- The systematic monitoring of safety performance using internationally recognized indicators so as to ensure constant improvement in performance and the highlighting of vulnerabilities and malfunctioning of prevention systems.

The cost of operating the company's health and safety programmes and maintaining safety equipment and medical centres was 1.8 million Euros in 2003.

This amount includes investments for upgrading the fire fighting system of the power units, upgrading of the lighting at various units, installation of double block and bleed valves on furnaces, installation of a new safety valve in the FCC unit, installation of safety equipment on the distillation unit following recommendations of a relevant risk assessment, the operational upgrading of the DCS system, the replacement of the safety valves in the dewaxing unit, etc.

Amongst the major refinery investment projects of the last three years that are safety-related were:

- Installation of a new gas-turbine in the power production section (cost: 23.3 million Euros).

- Implementation of the Distributed Control System (cost: 20.9 million Euros).
- Start of the implementation of the Automatic Process Control System; in 2003 the system was implemented in the FCC section, while it is planned to be implemented across all refinery units in the course of the next three years (total budget of the project: 8.8 million Euros).
- Start of works for installation of the Custody Transfer System at the jetty, aiming at enhancing the reliability, the safety and the effectiveness of product loading (total budget of the project: 1.6 million Euros).

The successful operation of the Health and Safety Management System is reflected in accident frequency and severity statistics (relating to company employees) which have shown a clear downward trend in recent years, although the severity index showed a slight increase in 2003 due to an accident which caused a long-term medical attendance. These statistics do not include accidents involving sub-contractors' employees, of which nine were recorded during 2003.

During the entire 32 years of the refinery's operation there has been no major accident leading to fatalities or permanent serious disability involving the company's own staff. In 2002, workers employed by sub-contractors were involved in three serious accidents as result of which four lost their lives and one was seriously injured. The accidents occurred in the course of work being carried out by the contractors within the refinery and in each

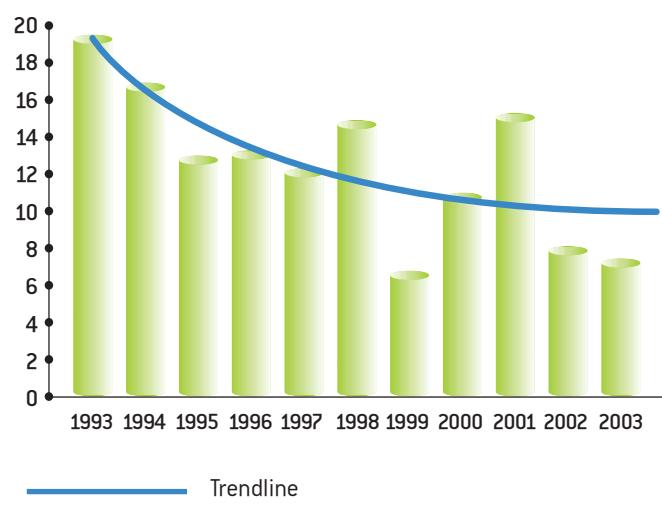


case the basic cause was a breach of refinery safety rules. The company has not only expressed its regret about the four fatalities but has taken practical steps to reduce to the minimum possible the likelihood of similar accidents occurring in the future. It is a fundamental principle of the Health and Safety Management System introduced in 2003 that no accidents are acceptable, especially those that endanger life, irrespective of whether it is company employees or subcontractors' employees that are at risk.

AVIN OIL, in its operations, follows equally strict standards as those described above aiming to achieve equivalent high standards of health and safety and to avoid all types of accidents. The company:

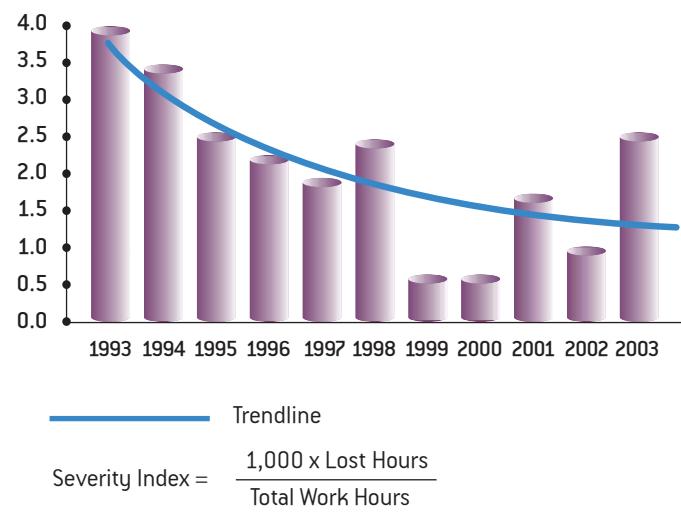
- Fully complies with all relevant legal requirements.
- Regularly makes available to the authorities full and accurate safety data about the products it distributes.
- Provides its employees with a safe and healthy working environment.
- Ensures that health and safety issues are handled by competent and dedicated in-house personnel (occupational physicians, safety engineers, etc.).
- Provides appropriate health and safety training to its employees and those with whom it collaborates.
- Keeps abreast, so far as possible, with international technical developments.
- Continuously strives to improve its health and safety performance.

**Accident Frequency Index**



$$\text{Frequency Index} = \frac{1,000,000 \times \text{Number of Accidents}}{\text{Total Work Hours}}$$

**Accident Severity Index**



$$\text{Severity Index} = \frac{1,000 \times \text{Lost Hours}}{\text{Total Work Hours}}$$



## Environment

MOTOR OIL has always acted responsibly and been concerned with environmental protection. It has continuously strived to apply all available methods and procedures for the effective protection of the environment. Being a member of the Greek Corporate Social Responsibility Network, it has espoused the principles of sustainable development, that is, development that satisfies today's needs without compromising the ability of future generations to enjoy access to the same resources.

MOTOR OIL's commitment to environmental protection is manifested through its Health, Safety and Environment Policy and is implemented through the operation of the company's Integrated Management System.

The *Environmental Management System* of the company was certified as complying with ISO 14001:1996 by BVQI (Bureau Veritas Quality International) in December 2000 for all refinery activities and was re-certified at the end of 2003, which will remain valid until January 2007. For an oil company to achieve the double ISO Certification (14001:1996 and 9001:2000) is unique in Greece and rare even in Europe.

In 2003, the company received renewed ministerial licensing permits covering its environmental operation terms, including those relating to the sulphur recovery unit, the road tanker loading terminal, the hydrocracker

unit and its associated facilities, and for the upgrade of the biological treatment facilities.

Key elements of the company's **environmental management system** are:

- Active participation of the company's personnel and of contractors' personnel working on its premises, through continuous training.
- Communication with interested third parties, including the local community, aimed at creative information exchange and the building of mutual trust.
- Four years ago, MOTOR OIL began holding annual meetings at the refinery, involving representatives of local communities, during which the company's investment plans are discussed, and opinions exchanged, with special attention being paid to environmental protection programmes; last year's meeting was held on 27 March.
- Complaints expressed by refinery neighbors are recorded and analyzed, and accordingly, short-term or long-term measures are taken to address the complaints. The number of complaints expressed in 2003 were fewer by 18% compared with 2002.
- Frequent internal and external evaluation and monitoring of the environmental performance of the refinery and



the continuous development of the environmental management system; for example, during 2003, 15 internal inspections were carried out within the framework of the company's integrated management system as a result of which 22 operational procedures were revised or reviewed.

A very important part of the company's overall investment programme relates to capital expenditure on environmental protection measures, as shown in the following table, which includes relevant investments made by AVIN OIL.

CAPITAL INVESTMENTS 2000 - 2003 (million Euros)

YEAR	2000	2001	2002	2003	TOTAL	PERCENT
Total capital expenditure *	82.0	39.2	47.4	88.5	257.1	
Environmental capital expenditure	62.4	13.6	9.3	58.3	143.6	55.8%
- For clean fuels	48.6	-	1.0	54.6	104.2	40.5%
- For Improving performance	13.8	13.6	8.3	3.7	39.4	15.3%

\* Acquisitions not included

Objectives of the **investment programme** include:

- Production of the most environment-friendly products possible, to the extent allowed by technological, legislative and financial factors, for example:
  - The most important investments made at the refinery in the last four years, as well as those planned for the next three, concern the production of cleaner fuels. In 2003, 55 million Euros were spent for the project of installing a new hydrocracking facility which together with the high-pressure desulphurization facility and other related improvements, (of a 400 million Euros budget), will make possible the production of "clean" fuels satisfying new specifications prescribed by the E.U. for 2005, and indeed even the stricter standards coming into force in 2009.
  - Capital investments were completed in 2000 on facilities to reduce sulphur and benzene levels in fuels, in order to comply with E.U. specifications, at a total cost of 66.6 million Euros; this involved:
    - \* the construction of a new benzene hydrogenation unit,
    - \* the construction of a new gasoline hydrodesulphurization unit,
    - \* the revamping of the reformer unit.
  - Reduction of consumption of natural resources and power through optimization of the consumption of water, steam and fuels; aiming to cover all the refinery's electric power requirements through self-generation of electricity and to prevent pollution of the environment by using, wherever possible, environment-friendly technologies.

In respect of the last-mentioned objective:

- An agreement was signed in the beginning of 2004 with the state gas company DEPA covering connection of the refinery site to the new natural gas distribution network. Natural gas will be used as a fuel to satisfy the heating and energy requirements of the refinery and also as a raw material for the new hydrogen production plant, helping to improve the environmental operating terms of the refinery. It should be noted that MOTOR OIL's becoming the principal industrial consumer of natural gas in the region was an important factor of making it economically feasible for the natural gas pipeline network to be extended to Corinth, Patras and the surrounding region, a decision which has significant positive economic and environmental consequences for the region.

- During 2001, the installation of a new (third) gas-turbine in the power production unit was completed (at a total cost of 23.4 million Euros). The new gas-turbine allowed for the self-sufficiency of the refinery in respect of electric energy.

- During 2002, the installation of a Distributed Control System (DCS) was completed. This investment (which concerns the monitoring of the refinery production process using computers), although not a direct environmental investment, will have a significantly positive effect on the environment through the automation of

production. Similarly beneficial for the environment is the commissioning of the Advanced Process Control System which, during 2003, was applied to the FCC unit.

- A project for the optimization of the refinery's slop management was completed in 2003, including the construction of a 10,000 cubic meters tank which will help improve energy efficiency.
- Management of gas emissions and constant monitoring of atmospheric quality:
  - The height of the refinery's flares and emission stacks is much higher than the statutory requirement so as to achieve better gas dispersion, while the use of gas fuels in the refinery was increased, thus reducing the emitted air pollutants.
  - Management of gas emissions and constant monitoring of atmospheric quality, conducted by fixed analyzers and a mobile measurement station, which record the main gas pollutants ( $\text{NO}_x$ ,  $\text{H}_2\text{S}$ ,  $\text{SO}_2$ , hydrocarbons and particulate matter). Four additional fixed analyzers were installed in 2003.
  - A programme aiming at reducing pollution from hydrocarbon leakages by 10% by using method EPA21 was completed in 2002.
  - In 2003 a project aiming at reducing the pollution



from gaseous hydrocarbons was implemented by fully covering the oil separators.

- In 2003 modifications were effected on the solid sulphur production unit, achieving a 97% reduction to the H<sub>2</sub>S emissions.
- In 2003 a system for measuring the chemical properties of furnace flue-gases was installed. This system will allow the reduction/prevention of any environmental impacts flue-gases might have in cases where limits are temporarily exceeded.
- In 2003 the installation of a new sulphur recovery unit was completed (total cost: 9.3 million Euros). This unit substantially improves the sulphur recovery rate thus proportionally reducing the environmental impact.
- The installation of the hydrocracker unit which started in 2003 will significantly improve the environmental performance of the refinery, as the emissions of air pollutants (mainly sulphur and nitrogen oxides) from the fuel catalytic cracking unit will be considerably reduced.
- The effective management of solid and liquid waste by implementing recycling and re-use wherever possible.

Liquid effluents are treated twice before re-use or disposal, over and above the limits set by Greek environmental ruling.

Moreover, waste water collected from all possible sources (sewage system, ballast, rain water) is properly treated before disposal in the sea.

- In 2003, a project was implemented for improving the operation of the biological treatment unit, by installing a device for the continuous monitoring of the temperature and the pH, which allows to reduce the time required for taking preventive measures. Furthermore, a study was carried out in the same year for the upgrading of the biological treatment unit; the budget for this project is 25 million Euros and is planned for implementation in 2004.

Particular care is taken for the disposal of solid wastes:

- The oily mud from the crude oil tanks is treated for crude oil removal and then is subjected to biological treatment in landfarms before disposal as filling soil.
- Exhausted catalysts are disposed of in a number of ways (sold abroad, regenerated, or disposed of at cement factories to be used in cement kilns, if recycling is not possible).
- Office paper is collected for recycling.

In 2003 the company participated in a joint study, with the Laboratory of Applied Geochemistry of the Geology



Department of the University of Patras, aiming at determining the chemical condition of sea water at the shore side of the refinery. Another study concerning the management of solid waste disposal was conducted in collaboration with the Biology Department of the University of Athens. Finally, the Laboratory of Biochemical Processes and Environmental Technology of the Environmental Engineering Department of the Crete Technical University carried out a study that confirmed the effectiveness of the landfarming methodology used by MOTOR OIL to treat the oily mud from crude oil tanks.

- The prevention of environmental damage in case of oil spills through the implementation of proper action plans, like the Oil Spill Contingency Plan.

In the sections above, the main environment-related projects and plans of MOTOR OIL of the last three years have been briefly presented. Their main focus is prevention. Of equal importance is, of course, the ability to deal with small-scale or large-scale incidents, if they occur. Cases of water pollution are of particular concern due to the extensive consequences they may have, affecting large areas by destroying marine life and causing an economic slowdown in the affected areas. The recovery cost in large-scale accidents is indeed huge.

MOTOR OIL is committed to taking all possible measures to prevent damage to the land, or to the Saronic Gulf, that may occur from the normal operation

of its refinery. However, due to the scale of operations and unforeseen natural occurrences, the possibility of a fuel leakage cannot be completely eliminated. In light of this possibility, the company's Oil Spill Contingency Plan provides measures for dealing with an oil spill. This plan is in accordance with the Local Contingency Plan (managed by the local port authorities) and the National Contingency Plan (managed by the Ministry of Mercantile Marine).

MOTOR OIL has suitable equipment (anti-pollutant agents, booms, collection vessel, etc.) for dealing with Tier 2 (medium scale) pollution and refinery personnel have been trained to use this equipment. Due to the distance of the refinery from assistance and from private pollution support centers, the equipment is much more extensive than required by law. Furthermore, the company is a member of Southampton Oil Spill Response Limited (an international organization that provides know-how and technical support in dealing with oil pollution, especially Tier 3 (large scale) incidents).

MOTOR OIL's Oil Spill Contingency Plan lists all tourist and other installations in the area along with the corresponding anti-pollutant agent that may be used in each case.

Practice drills are carried out on an annual basis (eight for dealing with a Tier 1 incident, two for dealing with a Tier 2 incident).

On 22 October 2003, a spillage occurred during the unloading of a tanker as result of a connection line



becoming accidentally disconnected. Some 50 cubic metres of crude oil were released into the sea. MOTOR OIL's Oil Spill Contingency Plan was put into effect and the spilled material was contained using floating booms, and most of it collected with absorbing materials. The operation was coordinated by the Ministry of Mercantile Marine and the local port authorities. Further measures to prevent such incidents were planned and will have been brought into effect during 2004, such as the upgrading of the loading facilities at the jetty.

AVIN OIL has been operating responsibly and effectively in the oil products market for 26 years and respect for people and the environment has always been and remains a priority. In order to ensure the safe and uninterrupted supply of its products and services to customers, the company has developed and implements a programme of measures which comprise its *Health, Safety and Environmental Protection Policy*. The policy requires compliance with all legal obligations, regulations and codes of practice. The company operates a comprehensive *Health, Safety and Environment Management System* which is subject to continuous checks and review to ensure its effectiveness and continuous development.

Between 1999 and 2003, AVIN OIL invested in its distribution network so as to be able to comply with the requirements of E.U. directive 94/63 (stage I) concerning control of volatile organic compound (VOC) emissions resulting from the storage and distribution of petrol.

The company's fleet of road tankers used to distribute its products has been equipped so as to control VOC emissions and, most recently, VOC emission control capability was also introduced at the road tanker loading terminal at Aghioi Theodoroi. VOC emission control systems are thus in operation throughout the fuels distribution chain: encompassing the terminal, the road tanker fleet and the service stations. In keeping with the company's policy of constant improvement, one service station has been equipped, on a pilot basis, with emission control equipment which complies with the requirements of the second phase (stage II). This phase concerns the recovery of VOC emissions occurring when cars are refueled at petrol stations.