



Environmental Statement 2008



VOLUNTARY ENVIRONMENTAL STATEMENT
ACCORDING TO EUROPEAN REGULATION 761/2001
EMAS (Eco-Management and Audit Scheme)

JULY 2009

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ΟΙΚΟΠΟΛΙΣ 2008
18/19

Message from the Administration

I am in the pleasant position to present the third edition of the Environmental Statement that we voluntarily publish, according to European Directive ER 761/2001 for the EMAS (Eco Management and Audit Scheme), as amended with ER 196/2006.

MOTOR OIL is registered at the Greek Ledger of EMAS organizations with registration number EL 000067.

This Statement constitutes part of our commitment for proper and rational Environmental Management in the frame of the Company's Integrated Management System and our policy to operate with respect to the Environment, taking into account all stakeholders.

In this Statement you will find data related to Refinery units and processes, reference to our Environmental Management Policy, as well as, an assessment of our 2008 environmental performance and the new objectives which we are committed to.

The investment policy of the Company is based on the development of new environmentally friendly products, implementing new technologies that are also friendly to the environment, while investing in process automation in order to improve the energy efficiency, as well as, the productivity of the Refinery.

In 2008 we signed the UN Global Compact Initiative, the aim of which is to direct businesses towards sustainable growth through volunteer and responsible attitudes and actions. Thus, we are committed to fully comply with the ten principles of the Global Compact with reference to human rights, labor, anti-corruption and the environment.

In 2008 the Refinery was connected to the National Natural Gas grid. Natural gas is used for Hydrogen production and also as a clean fuel, thus improving our environmental performance. In addition, the largest in scale maintenance program in the history of the Refinery was carried out in absolute safety.

The investment program continued with the commencement of works for the construction of a new Crude Distillation Unit, the capacity of which is 60,000 barrels of crude oil per day. The new facility includes Sulfur Recovery Units and is expected to be commissioned in 2010.

The ultimate responsibility for the Environment, as well as for the Health and Safety of our employees is mine.

The duties that I have assigned to my colleagues and employees in the context of Health, Safety and Environmental Management are specific and, as I believe, effective.

Two facts prove it:

Health and Safety Management was certified by Bureau Veritas in December 2008, according to the international standard OHSAS 18001:2007.

The Company was awarded, for the second consecutive year, with the «Oikopolis 2008-Environmental Investment» award.

Management's firm commitment and employees' enthusiasm are vital in achieving continuous improvement and in accomplishing our goals.

I hope that you will find this Statement not only informative but also interesting.

At this point I want to emphasize that I consider MOTOR OIL's Environmental Statement as an opportunity for communication with all stakeholders and in this context, my colleagues and I are at your disposal for any query or comment you might have.

M. J. Stiakakis
Manufacturing General Manager

1. Company Presentation

1.1 General Information

MOTOR OIL is a leading Company in the oil industry supplying the market with a wide range of reliable high quality energy products. The Company has evolved to one of the main pillars of the national economy, while, at the same time playing a key role in the wider area of South Eastern Europe.

MOTOR OIL started operating in 1972, as a Company engaged in refining and trading of oil products, and has been functioning ever since responsibly, aiming at sustainable profitability and socially responsible growth. The Company's Vision and Mission define the context which drives the planning and implementation of its dynamic growth. In addition, Company operation is based on a set of strict Principles and Values, which compose the elements of its business practices.

MOTOR OIL's Vision and Mission are based on three basic principles:

Respect for our People
Respect for the Environment
Transparency

The materialization of the Company's Vision and Mission is based on four Corporate values:

Effectiveness
Responsibility
Social Responsibility
Integrity

The Refinery premises of the Company are located at Agioi Theodoroi, Corinth, approximately 70 km away from Athens. Along with its auxiliary premises and its fuel distribution premises, the Company constitutes the largest private industrial complex in Greece, and is considered as one of the most flexible refineries across Europe.

It can process different types of crude oil, producing a wide spectrum of oil products that meet the strictest international standards, thus serving the supply requirements of Oil Companies both in Greece and abroad.

At the same time it is the only Refinery in Greece that has a lubricants production unit. Apart from the basic units, (atmospheric distillation, catalytic reforming and hydrotreatment) the Refinery includes conversion units (thermal, catalytic, and hydrocracking).

The following table summarizes some Company data.

Statistical Codification of Economic Activity:	232
NACE Code	DF.23.20 - Manufacture of refined petroleum products
Premises:	Agioi Theodoroi, Corinth
Installed Power:	Main electric motors power 69.3 MW Back up electric motors power 45.7 MW
Postal Address :	71st km of Old National Road Athens – Corinth, position «Soussaki»
Contact Person for EMAS	C.B. Korkas
Telephone number:	(+30) 27410-48602
Fax:	(+30) 27410-48255
e-mail:	korkasco@moh.gr
Responsible for Health, Safety and Environment	G.A.Palaiokrassas
e-mail:	palaiogi@moh.gr

The major shareholder of MOTOR OIL is the Vardinoyannis Group. In 2001, the Company effected a share capital increase by the means of an Initial Public Offering (IPO), as part requirement of its listing on the Athens Exchange.

The following table presents the Company's shareholder structure.

SHAREHOLDERS	%
Petroventure Holdings Limited	51.0
Petroshares Limited	10.5
Free Float	38.5
Total	100.0

1.2 Historical Evolution of the Company

MOTOR OIL was founded in 1972, accomplishing afterwards step-changes towards the improvement, expansion and upgrading of its Refinery. These steps are concisely presented in chronological order in the following table.

1972	Foundation and beginning of operation of the Refinery, comprised of a crude oil refining unit, a base lubes production unit and a jetty with loading terminal.
1975	Construction of an Atmospheric Distillation Unit, with a capacity of 100,000 barrels/ day and tanks with a capacity of 1.5 million m ³ .
1978	Construction of a Catalytic Reforming Unit (further processing of naphtha for gasoline production).
1980	Installation of a Fuel Catalytic Cracking Unit (processing of fuel oil into high added value products).
1984	Construction of a Power Plant that uses fuel gas as a raw material. Right of sale of electric power to the national grid.
1993	Quality management system certification according to ISO 9002 standard, concerning all the activities of the Company.
1996	Purchase of 50% of the Company's shares by Aramco Overseas Company BV, 100% subsidiary of Saudi Arabian Oil Company (Saudi Aramco). Relocation of Company Headquarters to a modern building in Marousi, Attica.
2000	Manufacture of products according to European Union standards for the year 2000, by constructing new units and converting the naphtha reformer to a continuous 103 octane reformation unit (CCR). New central control room and installation of a distributed control system (DCS). Environmental management system certification according to ISO 14001:2006 standard.
2001	Share capital increases through public offer of shares and listing on the Athens Stock Exchange. Installation of the new gas turbine at the Power Plant. Upgrading of lubricants' vacuum unit.
2002	100% aquisition of AVIN OIL, a domestic retail oil marketing Company.
2003	Development of a Quality Management System according to ISO 9001:2000 standard, which was certified in January 2003.
2004	Re-certification of the Environmental Management System according to ISO 14001:2004 for three more years. Beginning of operation of the truck loading terminal at the Refinery.
2005	Beginning of operation of a Hydrocracker unit enabling the production of clean fuels according to 2005 and 2009 European Union specifications. Acquisition of the stake of Aramco Overseas Company B.V. in the Company by MOTOR OIL Holdings S.A.
2006	Re-certification according to ISO 9001:2000 for three more years (until 2009). Accreditation of the Refinery Laboratory according to ISO 17025:2005.
2007	Re-certification of the Company's Environmental Management System according to ISO 14001:2004, valid until 2010. Company Registration in the Greek Ledger of EMAS (Eco Management Audit Scheme).
2008	Certification of the Occupational Health and Safety Management System according to OHSAS 18001:2007. Safe implementation of the largest in the history of the Refinery periodic maintenance program. Start of construction of the new -60,000 barrels crude oil per day- Distillation Unit. Award, for the second consecutive year, with the «OIKOPOLIS 2008 - Environmental Investment» prize from the non-governmental organisation, Ecocity.

1.3 Corporate Social Responsibility (CSR)

MOTOR OIL fully acknowledges the importance of continuous effort for sustainable development via the application of the principles and objectives of Corporate Social Responsibility. The Company expresses its social responsibility by being committed to pursue all business activities with due respect for people, the environment and society. Natural outcome of this commitment is a holistic approach in the application of principles of Corporate Social Responsibility, taking into consideration the protection of the environment, as well as the interests of all stakeholders- its personnel, shareholders, customers, suppliers and the society in its entirety.

MOTOR OIL is a founding member of the Hellenic Network for Corporate Social Responsibility and it has subscribed and participates in the Initiative of the United Nations Organisation for the Global Compact, aim of which is to direct the enterprises to viable growth through voluntary and responsible behavior and actions.

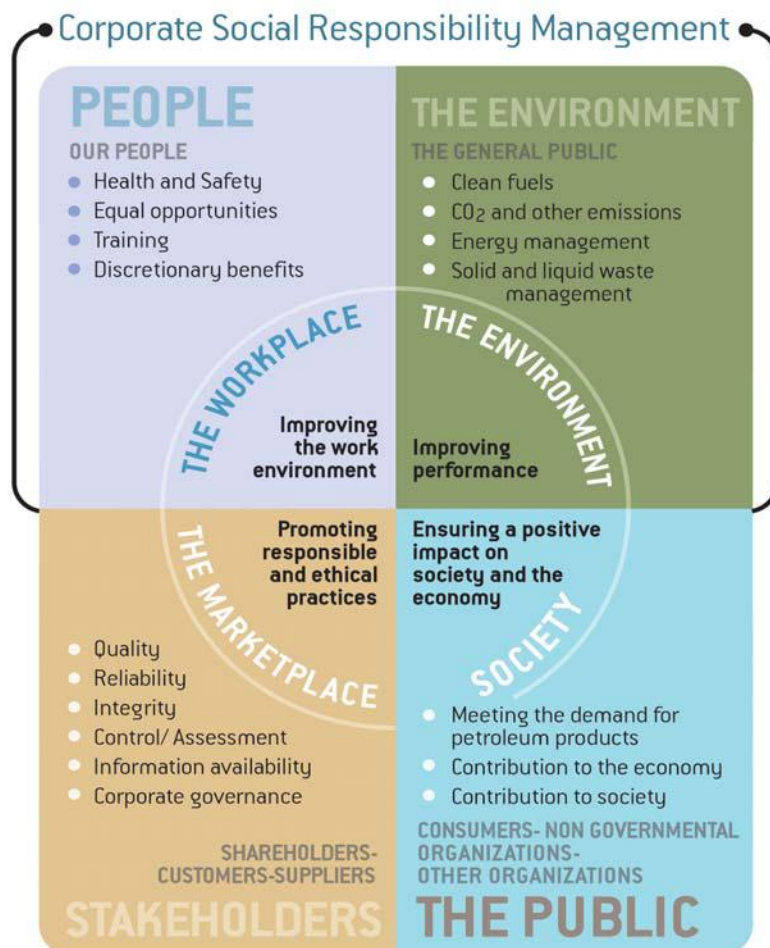
Corporate Social Responsibility (CSR) indicates a balanced approach to the economic, social and environmental impact of business operations that is consistent with the «society – environment – economy» triangle. This is widely and universally accepted by responsible members of the global business

community and underpins the main aspiration of corporations in terms of creating value for their shareholders, while satisfying customers, ensuring employee welfare, protecting the environment and contributing to society. This encompasses the notion of sustainable development, the kind of development that aims at meeting current needs without putting at stake the availability of resources for future generations.

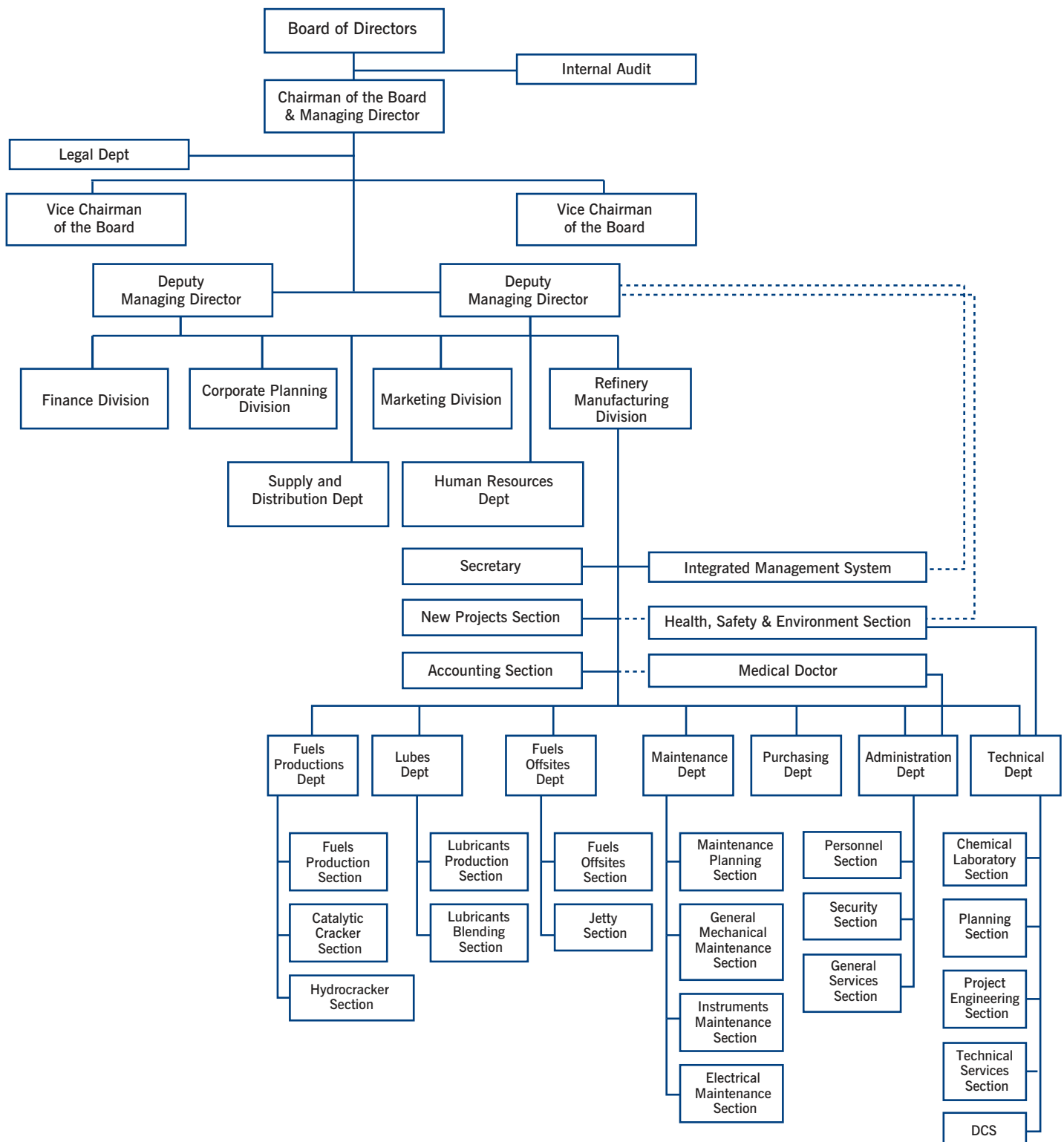
Consequently MOTOR OIL is fully committed to conform with the ten principles of UN Global Compact regarding:

Human rights,
Labor relationships,
the Environment and
Transparency (anti-corruption)

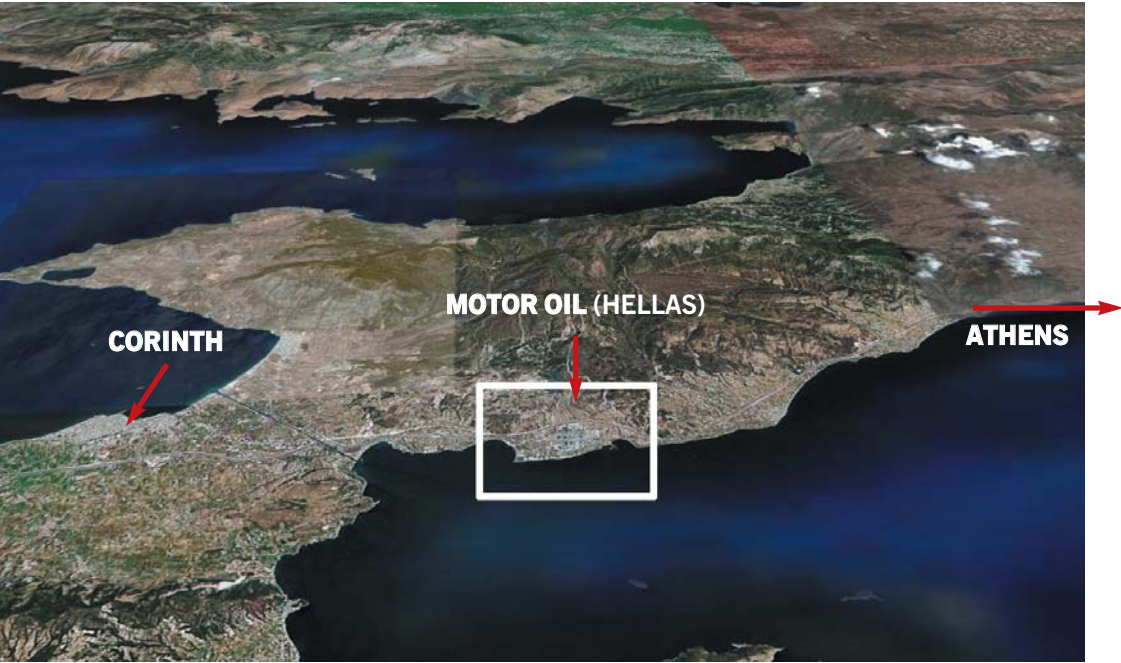
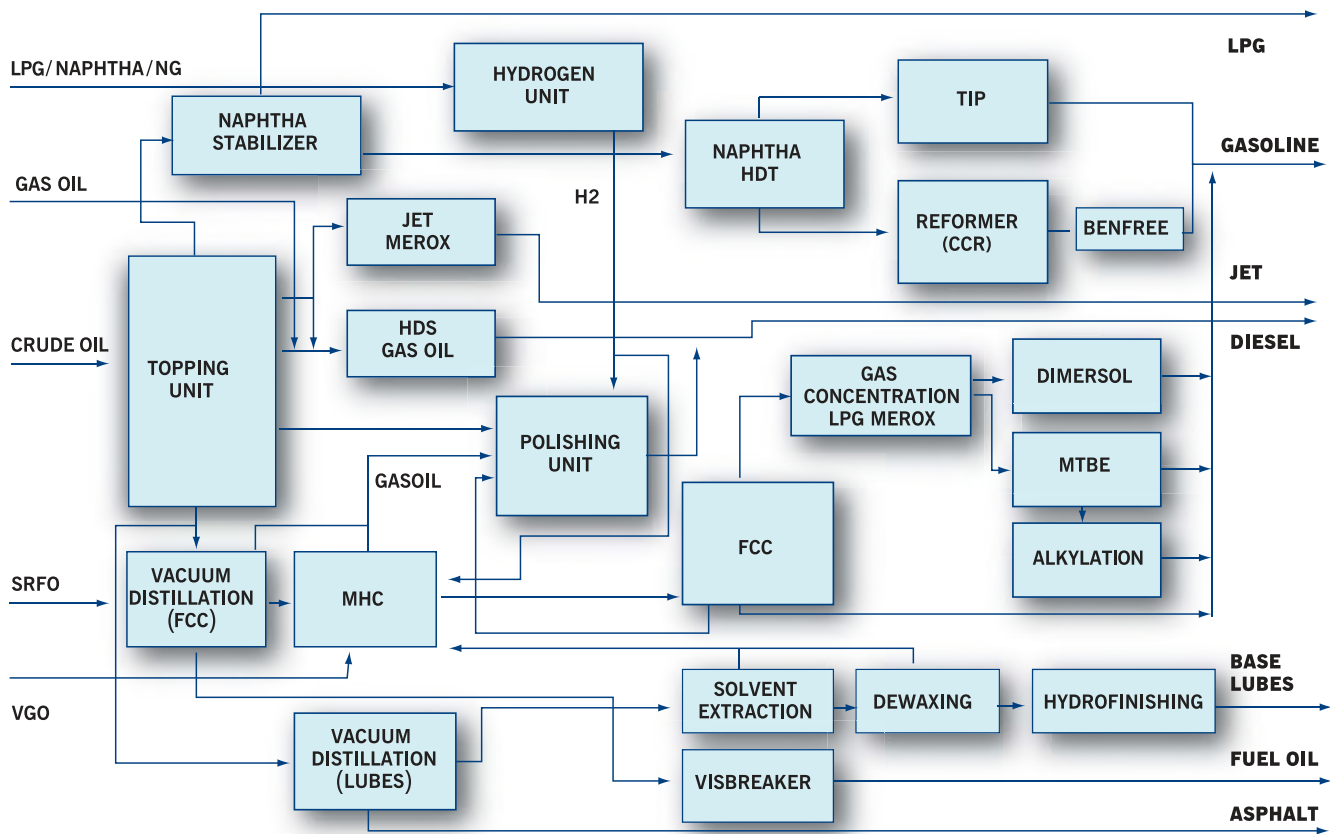
The most important challenges, among those MOTOR OIL faces, are related with Management of Health, Safety and the Environment. The framework for tackling these challenges and for achieving continuous improvement in the particular areas, according to the principles of Corporate Social Responsibility and the UN Global Compact, is defined by the Health, Safety and the Environment policy (see page 13).



1.4 Organization Chart



1.5 Refinery Flow Chart



1.6 Processes - Products

MOTOR OIL Refinery processes several types of crude oil, manufacturing a wide range of oil products that fulfill the strictest international specifications, serving this way oil companies both in Greece and abroad.

Products produced in the Refinery include:

FUELS	
● Liquefied Petroleum Gas (LPG)	
● Naphtha	
● Gasoline	
● Jet fuels	
● Diesel Oil	
● Fuel Oil	
LUBRICANTS	
● Base lubricants	
● Automotive lubricants	
● Gear Oils	
● Industrial lubricants	
● Marine lubricants	
OTHER PRODUCTS	
● Asphalt	
● Paraffin	

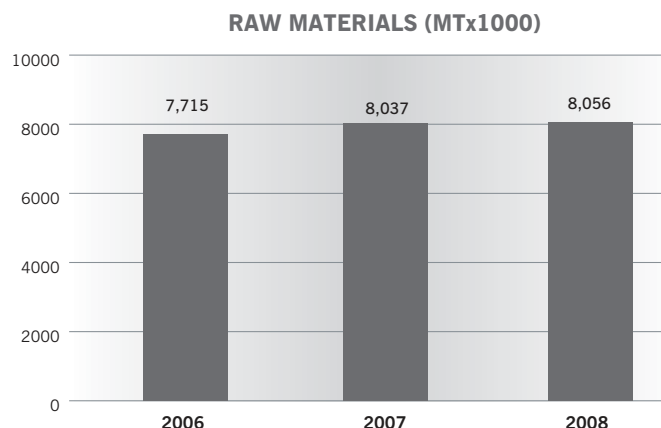
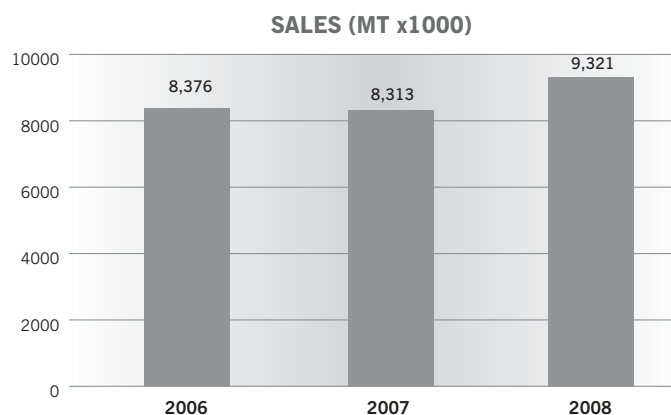
The maximum annual capacity of the main production units is the following:

Atmospheric Distillation Unit	4,958,160 MT
Visbreaker	1,314,000 MT
Vacuum Distillation Unit/ Lubricants	823,440 MT
Heavy H/C Desulphurization Unit	1,314,000 MT
Naphtha Desulphurization Unit	832,200 MT
Naphtha Catalytic Reforming Unit	569,400 MT
Benfree unit	445,000 MT
Vacuum Distillation Unit/ FCC	2,741,880 MT
Fluid Catalytic Cracking	1,533,600 MT
Mild Hydrocracker Unit	2,014,800 MT

Storage facilities and distribution premises include:

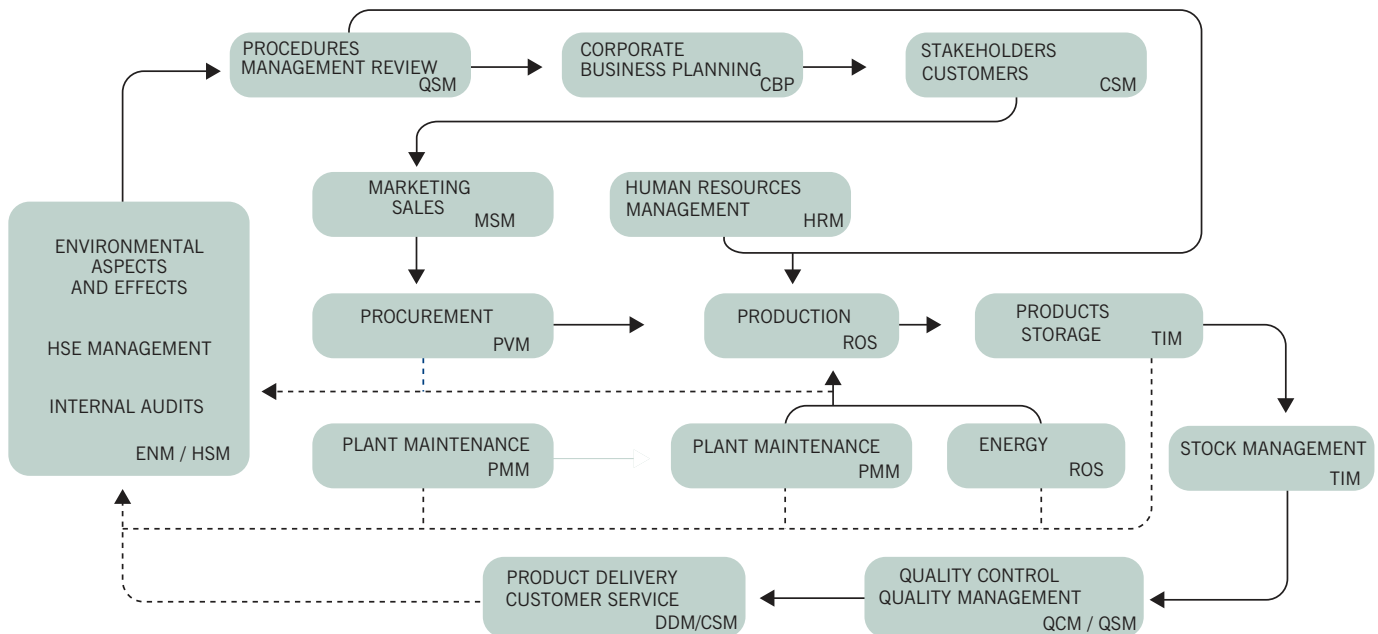
9 tanks for crude oil storage	1,080,000 m ³
110 tanks for intermediate and final products storage	1,229,000 m ³
Docks for tankers' loading and unloading	
Pipelines for transferring raw materials and products	
Truck Loading Terminals	

Company sales over the last three years, including trading and raw materials used (crude oil, straight run fuel oil, vacuum gasoil) are shown in the following diagrams:



2. Environmental Management

2.1 Environmental Management System



Making a continuous and systematic effort, MOTOR OIL has developed and implemented an Integrated Management System that governs Quality, Environmental and Safety management, according to the ISO 9001:2000, ISO 14001:2004 and OHSAS 18001:2007 standards, as well as, the European Regulation 761/2001 (EMAS). This System concerns the manufacturing and distribution of fuels, lubricants, waxes and oils. The Management System consists of a series of mutually interacting processes as it is depicted in the Interrelation Process Diagram. These processes include the production, the critical as well as the supporting processes.

Necessary clarifications on terminology for the Integrated Management System are given on the table below:

CBP	Corporate Business Planning
MSM	Marketing Sales Management
TIM	Tank Inventory Management
ROS	Refinery Operating Scheme
DDM	Delivery & Dispatch Management
CSM	Customer Satisfaction Management
PMM	Plant Maintenance Management
PVM	Procurement Vendors Management
HRM	Human Resources Management
QCM	Quality Control Management (ISO 17025)
HSM	Health & Safety Management (OHSAS 18001)
ENM	Environmental Management (ISO 14001/EMAS ER761)
QSM	Quality System Management (ISO 9001)

Environmental Management is included in the Company's supporting processes. The Environmental Management System aims to the accomplishment of continuous environmental improvement, the compliance with the current Greek and European environmental legislation and the continuous effort to minimize the effects on the Environment from the various operations.

The System structure follows the steps of the dynamic, cyclical process as depicted in the following diagram.



MOTOR OIL's Environmental Management System includes the following levels of documentation:

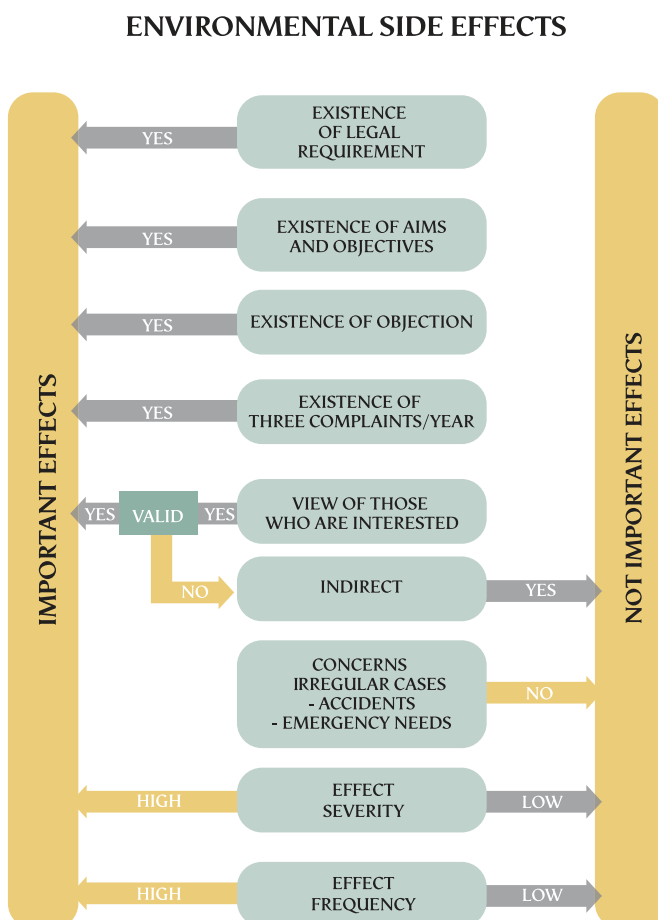
A Manual of the Integrated Management System, which, amongst others, constitutes a guide for the implementation, maintenance and improvement of the Environmental Management System

Procedures – Environmental Management Guidelines, which describe the sequence of actions and the assignment of authorities.

Files, Forms and Documents.

One of the main points in planning and implementing the environmental management system is the identification of environmental aspects and the evaluation of the environmental effects.

The environmental effects are assessed according to a series of criteria. The environmental effects assessment method is shown on the following diagram, from which the most significant environmental effects are extracted.



2.2 Health, Safety and Environmental Policy (HSE Policy)

MOTOR OIL operates with respect to Health, Safety and the Environment. To achieve that, MOTOR OIL is committed to:

- set objectives and realistic targets in order to accomplish a continuous improvement of the implemented management systems concerning Health, Safety and the Environment.
- meet or exceed legal and other requirements
- manufacture quality and environmentally friendly products using raw materials, energy and technology efficiently.
- report its performance, good or bad, as a responsible corporate citizen.
- maintain and test emergency preparedness and response systems.
- integrate Health, Safety and Environmental considerations into all business decisions, plans and operations in the framework of the Integrated Management System.
- provide consultation, information and training to employees, contractors and other staff working on its behalf in order to ensure their commitment and awareness.
- improve the quality and the treatment of waste, discharges and emissions.
- cooperate with all stakeholders in order to develop balanced Health, Safety and Environmental programs.

***At MOTOR OIL (Hellas) Corinth Refineries S.A.,
whatever we conceive, plan or do,
we do it in a safe, environmentally friendly
and cost-effective manner.***

2.3 Environmental Programs

During the years 2003-2008 the Company completed a series of programs aiming at the minimization of the environmental impacts of its activities, while reducing consumption and loss, recovering raw materials residues and reducing production cost. The objectives of such programs and their completion time is shown in the following table:



	2003	2004	2005	2006	2007	2008
AIR						
10% reduction of local leakages of volatile organic compounds by implementing the LDAR program for detecting, controlling and repairing leakages.						
- During 2006, this program was implemented in the new truck loading terminal (TLT)				●	●	
- During 2007 this program was implemented in the new Hydrocracker complex.						
Reduction of volatile organic compounds emissions from oil separators by setting shelters.						
In 2005, the setting of floating covers was completed in API III, whereas, in 2006, the shelters API I and API II were replaced			●			
Reduction of H ₂ S, SO ₂ emissions and other air pollutants:						
- Installation of a new sulfur degasification unit (96.7% reduction of H ₂ S emissions in solid sulfur)	●					
- Optimization of the performance control of the sulfur recovery units, using a permanent device monitoring H ₂ S/SO ₂ at the output of the units and installing a new Claus unit.	●				●	
- Installing a monitoring device of H ₂ S, SO ₂ and O ₂ in the Incinerator's chimney aiming to the effective emissions control	●					
- Implementation of tail gas treatment	●					
- Operation of H ₂ S monitoring devices in the entrance of Claus units and connection to the Distributed Control System (DCS)	●					
- Installation of devices continuously monitoring pollutants (H ₂ S, SO ₂)	●					
- Installation of measuring devices for main parameters in order to control the performance of the units (temperature, pressure, flow)	●					
- Installation of a continuous monitoring system for total sulphur in the fuels flare.	●					
- Installation of a device that marks the valve position that leads the sour gases to the flare.	●					
- Upgrading the air quality monitoring station at the port to measure additional pollutants (PM _{2,5})						●
- Monitoring CO ₂ emissions by measuring carbon concentration in fuel gas at the laboratory. At the same time, Accreditation of the MOTOR OIL laboratory making measurements of gas emissions.						●
- Monitoring emissions of methylmercaptane in the wider area	●					

	2003	2004	2005	2006	2007	2008
AIR						
Monitoring the gas emissions from the stacks by measuring sulfur dioxide, nitrogen oxide, dust, temperature, flow discharge			•			
- at the local stacks of furnaces (set up of sampling points)						
- in central stacks of fuels and lubricants (devices for continuous monitoring)						
Checking sulfur quantity in fuel gas, by installing a laboratory device that measures the aggregate sulfur.	•					
Reducing odor levels in the wider area, by reducing the temperature of fuel oil, before storage.		•				
WATER						
Improvement and modernization of the unit which processes and controls industrial waste water:						
- project for upgrading the unit that processes industrial waste water.	•					
- operation of a device that continuously measures pH and temperature at the inlet and outlet of the unit.	•					
- laboratory measurements of microbiological load	•					
- Upgrading and modernizing the processing stages of WWT				•		
Construction of a tank with secondary seals, for processing the slops of the Refinery.		•				
Installation of a system monitoring leakages coming from discharged cooling water	•					
Installation of a system that monitors the effluent of alkaline waste water (pH, sulfate compounds, sulfur compounds and mercaptanes)		•				
Installation of a system to deal with the foaming problem at the biofilter of the facility.						•
Aeration of the stabilization tank for the sludge coming from the WWTP, in order to improve the quality of the sludge to be processed.						•
SOIL						
Research on the optimization of methods for biodegradation of sludge by isolating and characterizing the bacterial population possessing biodegradation capabilities, cultivation, enrichment / oxygenation (pilot program).			•			
Completion of the results report of land environmental control, in the region where, the process of landfarming took place formerly.					•	
Demolishing asbestos-cement sheets of 1,075 m ² and disposal via a licensed Company.						•
ENERGY						
Connection with the national natural gas network and use of natural gas in the production process.						•

2.4 Environmental Aspects and Effects

All the environmental effects related to the operation of the Refinery have been evaluated according to their severity and among them the following are characterized as important:

Gas emissions occurring from local combustion points and Refinery processes

Industrial and Sanitary waste water

Solid waste, hazardous or not

Energy and water consumption

Noise pollution

All the above environmental effects are being monitored and recorded on a regular basis, and measures are taken continuously to encounter the problem, so that the Company will act accordingly in order to improve its environmental performance. A similar evaluation is made for the effects in the phase of new constructions.

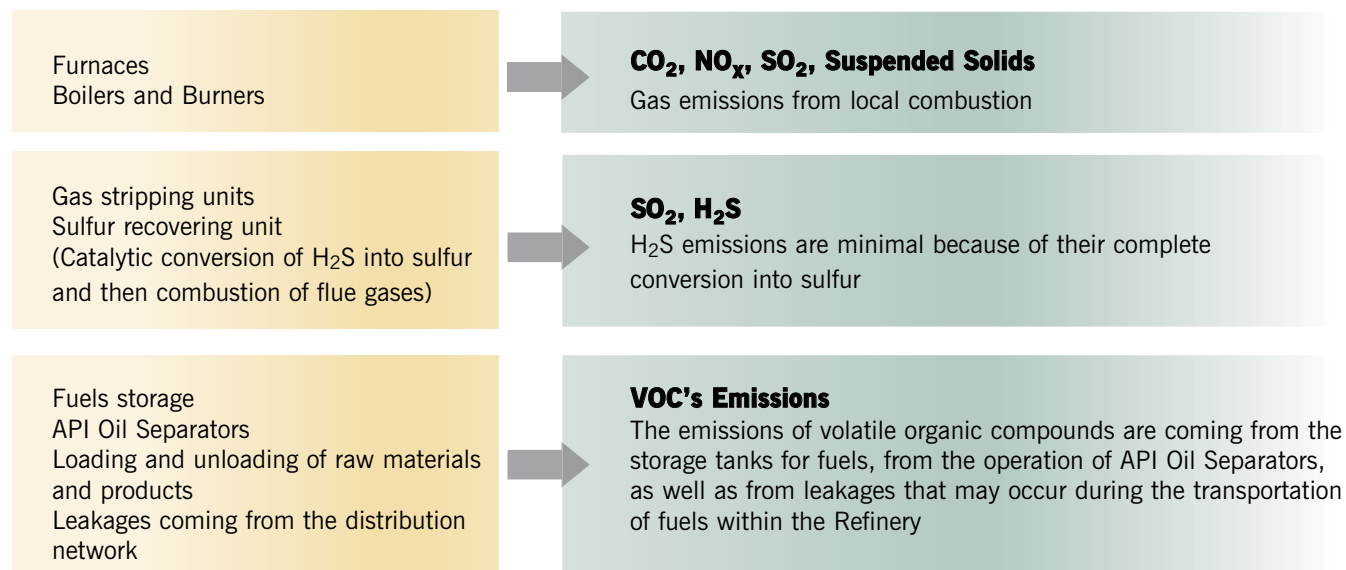
At the same time the Company has evaluated the indirect environmental effects resulting from the interaction with third parties and involving products and services over which the Company does not have the administrative control.

The key environmental aspects associated with gas emissions, the liquid and solid waste, as well as, the indirect environmental effects are described in the following sections:



2.4.1 Air Quality

Gas emissions due to the Refinery's operation, as well as their sources are shown on the following diagram.



The Refinery takes a series of measures and implements programs aiming at reducing gas emissions in the atmosphere. These measures include:

The treatment of acid and liquid gases before their storage, or their use as a fuel, aiming to control hydrogen sulfide.

Installation of sulfur recovery units aiming at converting the produced hydrogen sulfide into solid sulfur, which is environment friendly.

The reduction and control of hydrocarbon emissions by taking several measures such as the installation of closed circuits in gas processing operations, the release of gases from safety valves to the flares, the setting of secondary seals in floating roof tanks, the setting of floating covers in oil separators and the installation of a Vapour Recovery Unit (VRU) in the Truck Loading Terminal.

Performance control of burners and boilers.

Measuring and recording of gas emissions.

2.4.2 Wastewater

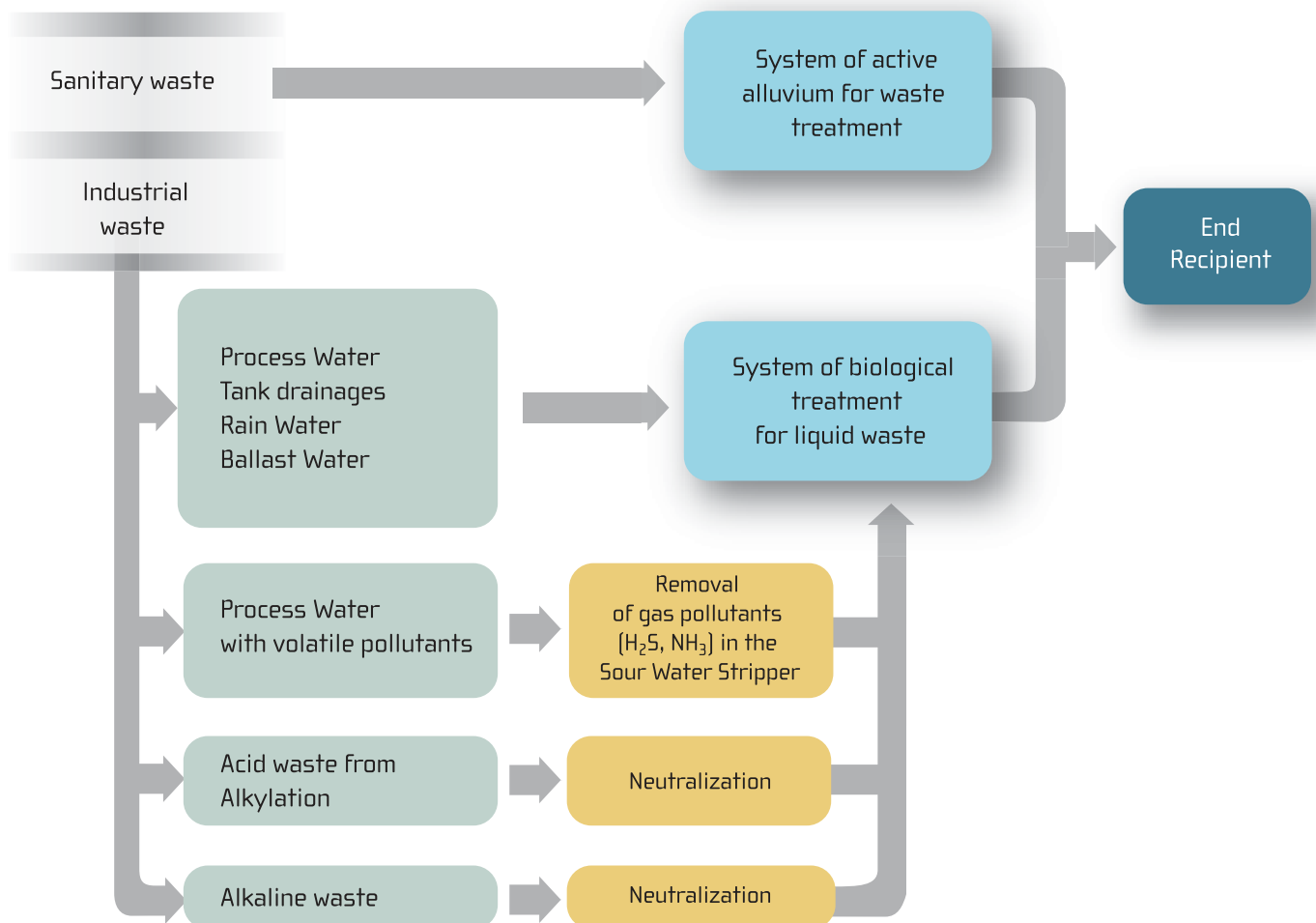
Wastewater produced in the Refinery is distinguished in two categories:

Industrial wastewater

Sanitary wastewater

Industrial wastewater, which includes water coming from process units, tank draining, rain water and ballast of vessels is led either directly, or after some pre-treatment process, into the biological treatment system for industrial waste water (secondary treatment), where their waste load is reduced, before their final disposal, according to the environmental provisions and terms.

Sanitary wastewater coming from personnel catering and hygiene areas is treated into an active sludge wastewater treatment system (tertiary treatment). The qualitative characteristics of the treated wastewater are within the defined legislative limits



2.4.3 Solid Waste

Solid waste produced in the Refinery is distinguished in urban waste resulting from human activities (consisting of household solid waste such as, paper and metal, food leftovers etc.) and in industrial solid waste which is created during the different stages of the production process (such as scrap materials, spent catalysts, etc.).

In order to ensure their safe environmental management and to prevent or reduce the negative consequences to the environment as well as any risk to human health and safety, the Company implements a thoroughly organized procedure in all stages of waste collection, transportation and temporary storage or

treatment, until the final disposal. The final disposal is performed by licensed companies, depending on the nature of the materials while the ultimate goal is waste reduction or reuse.

The Company submits an annual waste report to the competent authorities of the Ministry of Environment, Urban Planning and Public Works, where all the waste types that result from the activities of the premises as well as the way of disposal / management, are reported.

In the table bellow, all the types of solid waste produced by the Company facilities are mentioned.

Type of Waste	EWC Code	Management Method
Scrap materials	170407	Recycling
Wood packaging	150103	Recycling
Plastic packaging	150102	Recycling
Paper or cardboard packs	150101	Recycling
Tyres at the end of their life cycle	160103	Recycling
Used activated carbon	190904	Use as an alternative fuel or as a raw material
Saturated or spent resins	190905	Collection and disposal to legal recipient
FCC spent catalyst	160804	Re-export to the suppliers
Sludge resulting from tank cleaning (biodegradable material)	050103*	Treatment in the sludge processing unit and biodegradation by using the land farming method
Paraffin production waste	160305	Recycling
Alumina	050199	Use as an alternative fuel or as a raw material
Inactive pellets	050199	Recovery
Recovery linings and refractories from non-metallurgical processes	161106	Collection and disposal to legal recipient
Stabilised waste other than those reported in the code 190304	190305	Collection and disposal to legal recipient
Electrical and electronic equipment waste	200136	Recycling
Mixed municipal waste	200301	Collection and disposal to legal recipient
Batteries Ni, Cd	160602*	Recycling
Accumulators	160601*	Recycling
Used mineral oils	130208*	Recycling
Spent catalyst	160803*/ 160802*	Recovery
Metal Waste, contaminated by hazardous substances	170409*	Collection and disposal to legal recipient
Other construction and demolition waste (including mixed waste) containing hazardous substances	170903*	Collection and disposal to legal recipient
Packaging containing residues of hazardous substances or contaminated by them	150110*	Collection and disposal to legal recipient
Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals	160506*	Collection and disposal to legal recipient
Fluorescent tubes and other mercury-containing waste	200121*	Collection and disposal to legal recipient
Soil and stones containing hazardous substances	170503*	Collection and disposal to legal recipient
Construction materials containing asbestos	170605*	Collection and disposal to legal recipient

2.4.4 Indirect Environmental Aspects

The indirect environmental impacts are mainly related to the air pollution caused by forklifts and other vehicles, the H/C gas emissions during loading and unloading of the products into the ships, the noise coming from tank truck traffic and vessel stopover in anchorages, the wastewater of AVIN station, as well as, the side effects in case of an accident during the transfer of products to and from the Refinery either from suppliers or from customers.

Within the framework of the Integrated Management System, the Company evaluates its environmental performance and trains its suppliers, contractors and subcontractors on several environmental issues and continuously gives information to its customers regarding the usage and distribution of the products. At the same time, it looks for new mild, environmentally friendly ways for transportation and attends to the effective organization of its raw materials and products transportation.

2.4.5 Environmental Incidents

Having set as main priorities the prevention of consequences that may result from the operation of the Refinery, and the minimization of hazards during operations, the Company aims to the elimination of environmental incidents/ accidents.

For that purpose the Company has compiled Emergency Plans that are fully compliant with the local and national plans for fighting pollution through which it provides necessary directions for the right decision making and actions. At the same time, the Company trains systematically its labor force in order to ensure the right reaction in the case of emergency.

The effectiveness of the above activities is verified by having zero environmental incidents/ accidents during 2008.

3. 2008 Results

3.1 Environmental Performance

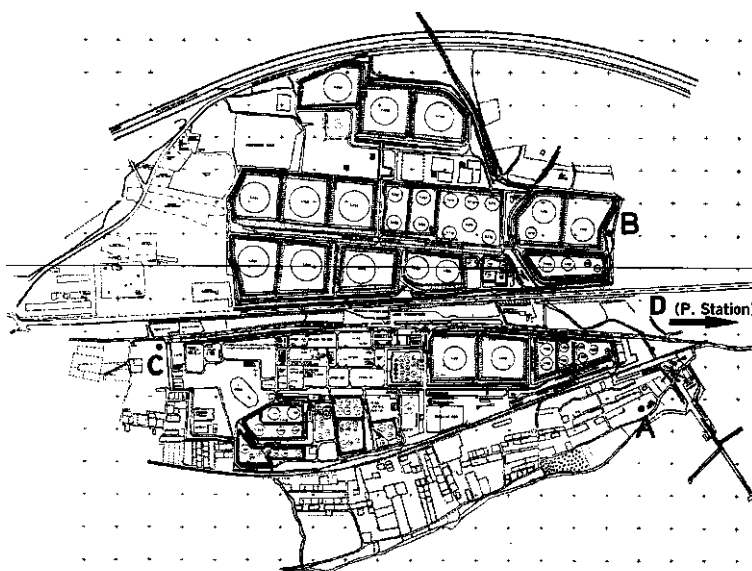
3.1.1 Air Quality Management

Aiming at the protection of air quality, the Company fully and constantly monitors the gas emissions both in Refinery units and in the wider area through continuous measurements that are executed not only on some local emission sources (chimneys, flares) but also on diffused emissions.

The industrial premises of MOTOR OIL utilize modern equipment concerning the monitoring of air quality and spot emissions coming from different sources during the production process. The Air Quality Monitoring System consists of a mobile station (A) that has the capability to measure and record pollutants such as hydrogen sulphide (H_2S), sulphur dioxide (SO_2), suspended solids (PM_{10}), nitrogen oxide (NO_x), methane (CH_4), nonmethane hydrocarbons (NMHC), as well as, meteorological parameters. In September 2008 the Company started measuring and recording suspended solids ($PM_{2.5}$) and CO. In addition there are three permanent stations for measuring hydrogen sulphide (H_2S) and sulphur dioxide (SO_2). Two out of the three permanent stations are located within the Refinery premises, and the third one at the Agioi Theodoroi Police Station (see map).

Furthermore, oxygen measurements are executed in all combustion spots in order to control combustion and continuous measurements of sulfur dioxide (SO_2), suspended solids (PM_{10}) and nitrogen oxides (NO_x) in the Major Combustion Plants whose capacity exceeds 50MW (central stacks). Moreover, continuous and non-continuous measurements are made in individual emission sources.

Map depicting the key locations of air quality monitoring stations



Air Quality:

SO₂, NO_x, PM₁₀, CH₄, NMHC

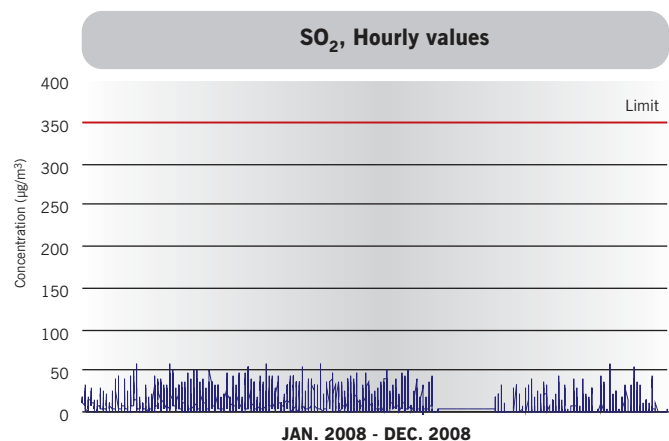
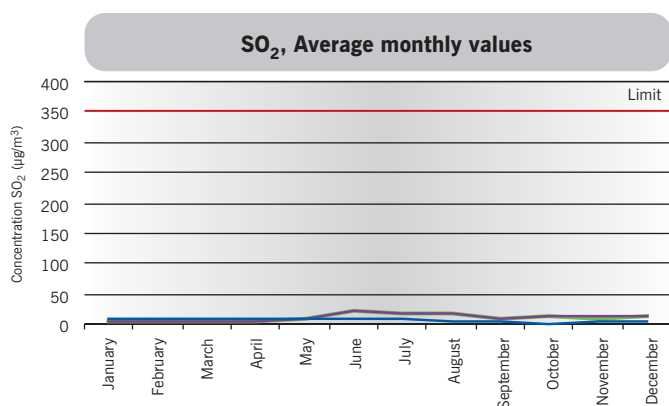
The results of the monitoring program show that the atmospheric conditions in the Refinery area are quite satisfactory.

Specifically, the recorded data during the years 2006, 2007 and 2008 show that not only there aren't any excesses of the allowed hourly limits stated by the legislation (SO₂: 200 µg/m³, NO_x: 350 µg/m³) or any excesses of the allowed daily limits (PM₁₀: 50 µg/m³), but also the observed values are much lower than those of the marginal ones.

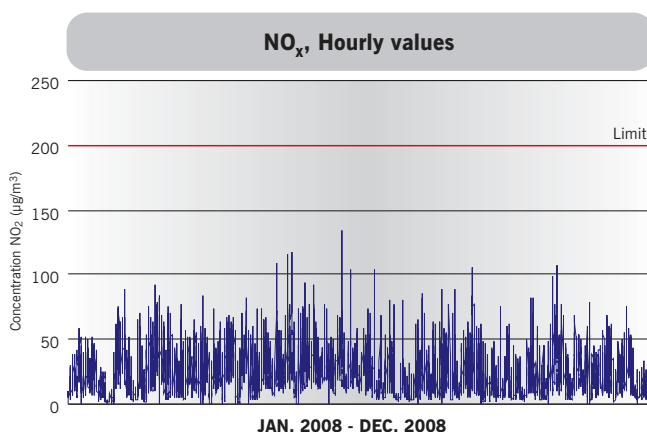
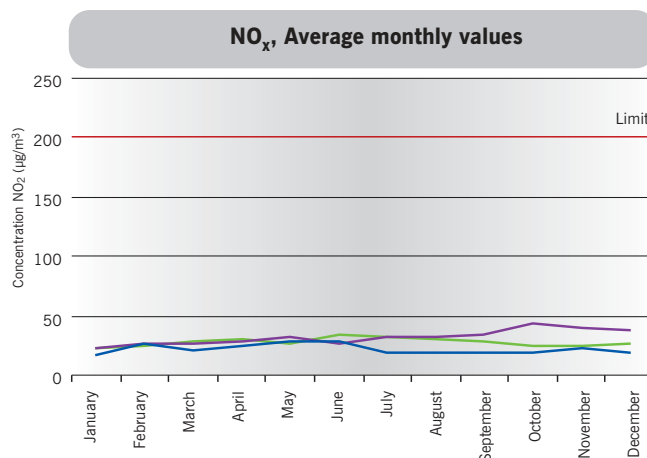
It should be noted that the Refinery is only one among many sources that produce air pollutants in the greater area. Some other sources that produce air pollutants include the traffic on the Athens – Corinth national road, the existence of several nearby industrial units, as well as, the railway network.

The variation of the pollutants values measured by the mobile station of the Air Quality Monitoring Network are plotted in the diagrams.

Sulphur Dioxide

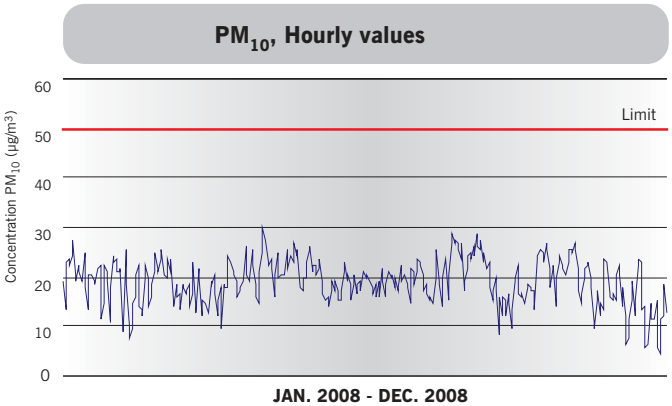
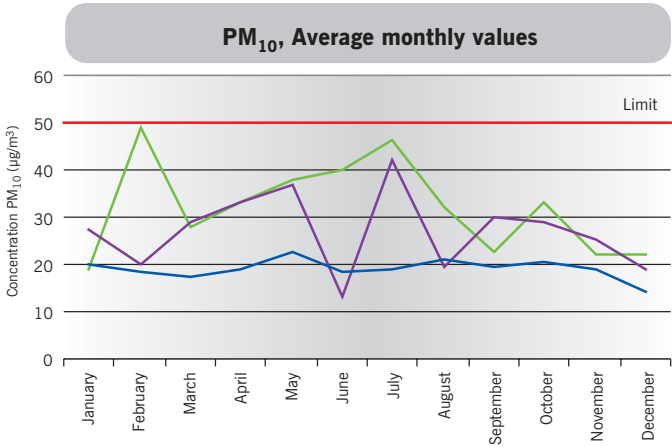


Nitrogen Oxides

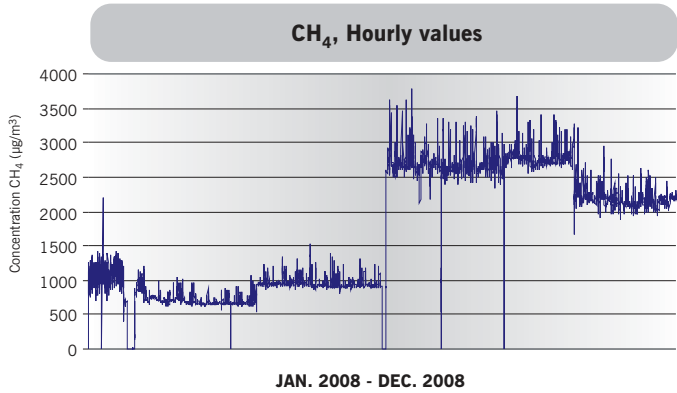
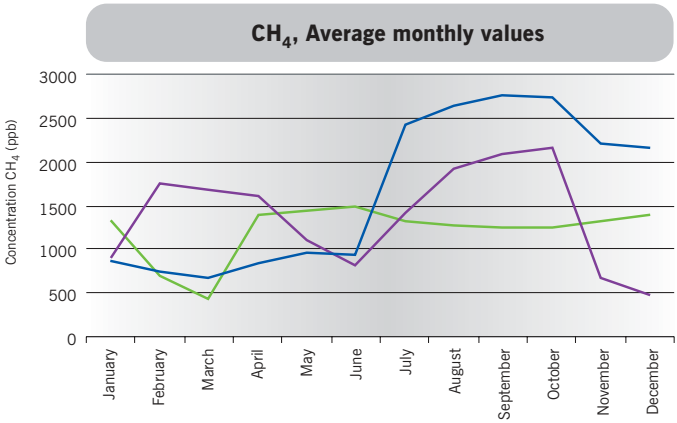


— 2006
— 2007
— 2008

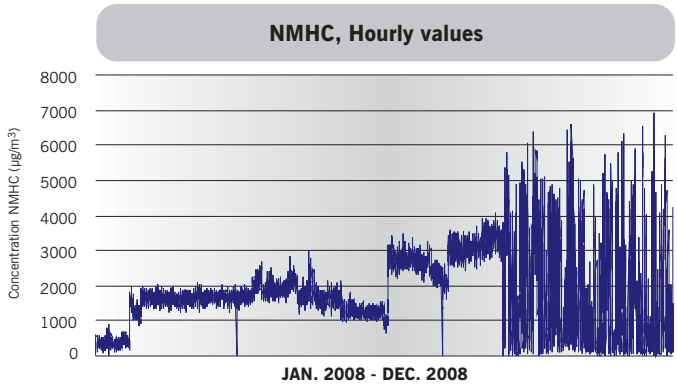
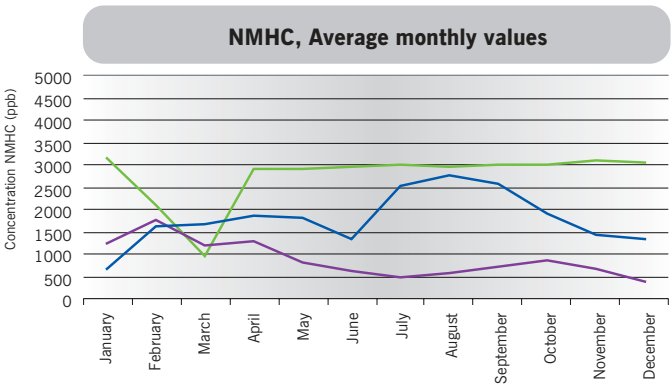
Suspended Solids



Methane



Non-Methane Hydrocarbons



— 2006
— 2007
— 2008

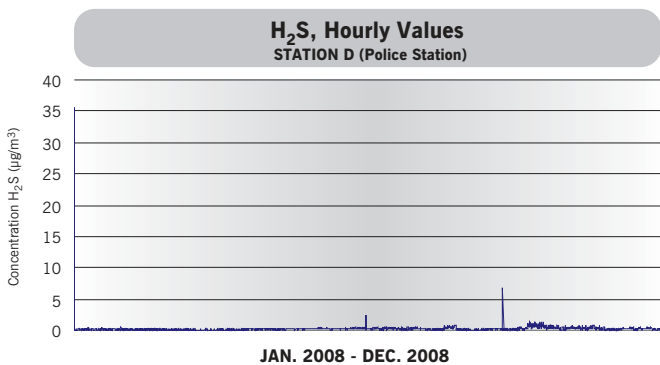
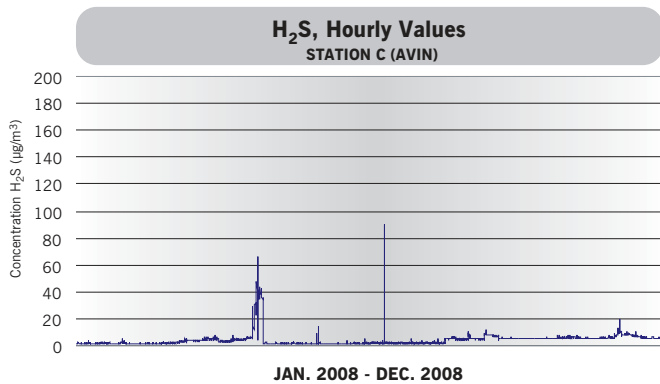
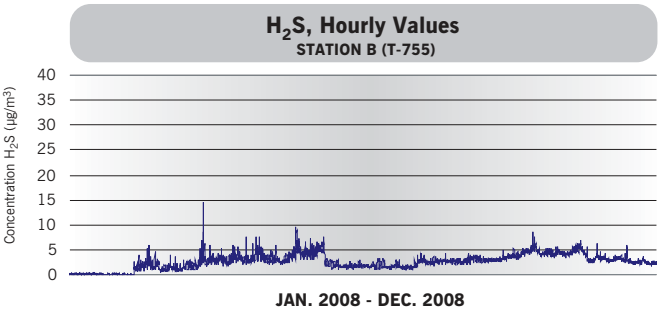
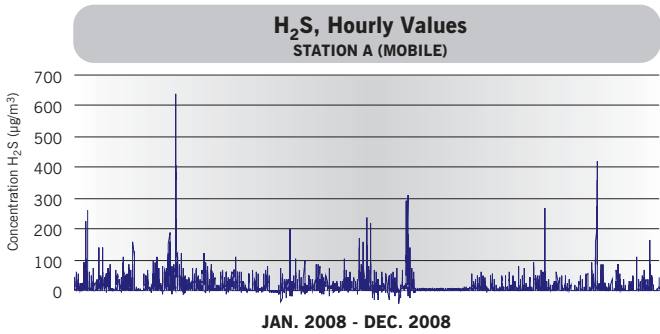
Air Quality: H₂S

The Refinery has achieved minimization of hydrogen sulfide emissions by upgrading the acid gas processing units, as well as, the sulfur recovery units.

H₂S concentration is monitored on a daily basis in all of the four stations of the Air Quality Monitoring Network.

Based on the measured values, it is concluded that H₂S concentration in the greater Refinery area is remarkably low, according to the measurements of the station located at Agioi Theodoroi (Police Station).

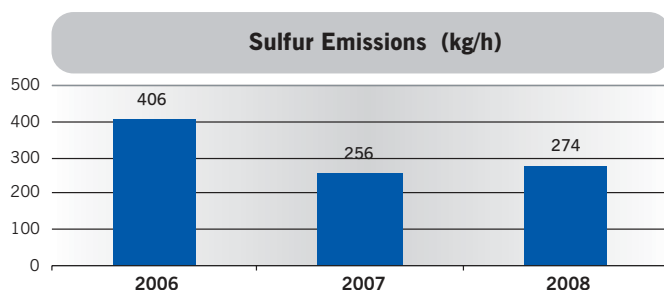
Hydrogen Sulfide



HSE Certificates

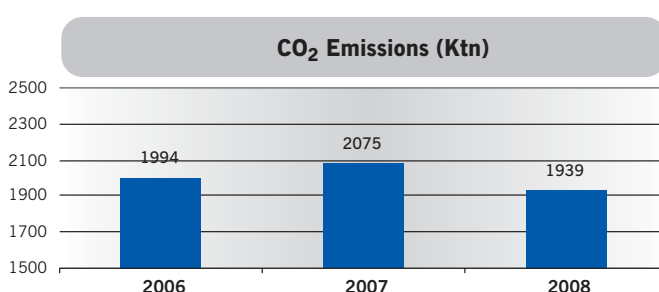
Sulfur Emissions

In 2007 sulfur emissions were remarkably reduced compared to previous years, despite the expansion of the process units and increased production. This is mainly due to the lower sulphur content in self-consumption fuel. This environmental performance continued in 2008, with a repeated low value for sulfur emissions



Carbon dioxide emissions

Total carbon dioxide emissions for 2008 were 1,938,511 metric tonnes. The reduction in the quantity of the emitted CO₂ is attributed to the Environmental protection investments that took place in the past few years.

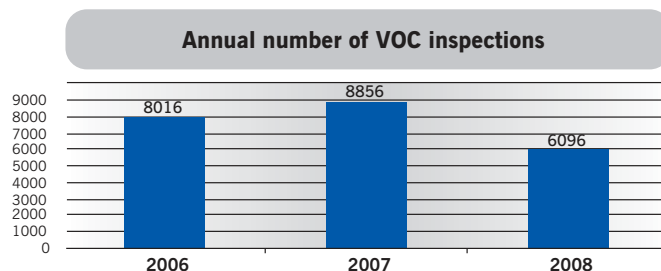


Emissions of Volatile Organic Compounds (VOC's)

Having set as a goal the reduction and control of Volatile Organic Compounds emissions, the Company has implemented amongst other a series of programs that include the reduction of diffused emissions coming from different sources (oil separators, unit equipment) and the installation of secondary seals in the floating roof tanks.

Diffused emissions of Volatile Organic Compounds, is a chemical and oil industry characteristic that not only is a source of pollution but also a cause of forgone profits and loss of products for the industry. Thus, the goal of reducing such emissions is dual. The anti-pollutant measures taken in order to reduce the emissions coming from oil products storage and distribution units, include equipment upgrades (tanks, pumps, etc), as well as regular inspections and maintenance of all units, which is very crucial in emissions control. In order to reduce the emissions arising from the loading of Road Tankers, a vapour recovery unit has been installed, in accordance to current legislation which is internationally accepted as the most effective measure to minimize such emissions.

Specifically, in order to check the equipment, the Leak Detection And Repair (LDAR) program is being applied, by which the leakages are observed and recorded during regular inspections done by the departmental operators. The inspections are carried out with portable devices and the leakages are fixed the soonest possible. As shown on the diagram, the number of inspections in 2008 is less compared to previous years, as a result of extensive equipment maintenance work.



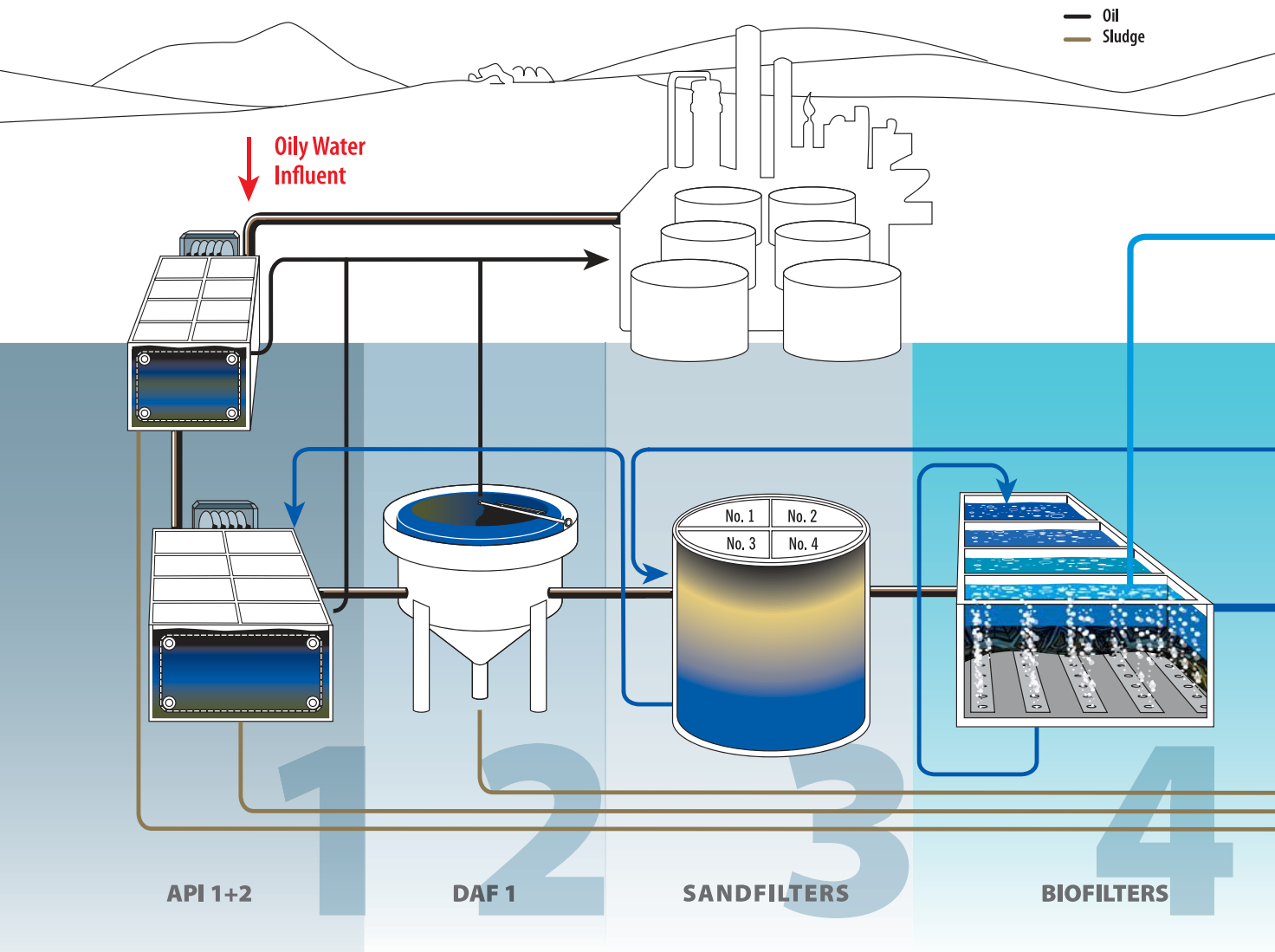
3.1.2 Wastewater

Industrial wastewater produced by the Refinery's process units after its pre-treatment, is routed in an industrial wastewater treatment plant, the operation of which is based on a sequence of steps, that are depicted on the diagram that follows (API Oil Separators, Dissolved Air Floatation (DAF) units, sand filters, biofilters, sludge treatment). At the same time, the sanitary wastewater is treated in a separate wastewater treatment plant.

The aim of industrial and urban wastewater treatment systems is the full treatment of wastewater so that the treated effluent is in compliance with the requirements of current legislation. Wastewater effluents are measured on a daily basis, whereas, a lot of programs are simultaneously implemented aiming at efficiently facing the results of malfunctioning of the treatment units and at the automation of the units and the optimization of their performance. The quality characteristics of the effluents are shown on the next tables where one can conclude that in most cases their measured values are much lower than those defined by the legislation.

Industrial Wastewater Treatment Plant Outlet

Parameter	Average values 2008	Threshold limits
pH	7.9	6- 9
Temperature (°C)	34	<35
Oil content (mg/l)	5	<10
BOD ₅ (mg/l)	26	<40
COD (mg/l)	108	<150
NH ₃ (mg/l)	14	<15
Phenols (mg/l)	0.4	<0.5
Sulfides (mg/l)	0.6	<2
Suspended solids (mg/l)	17	<40



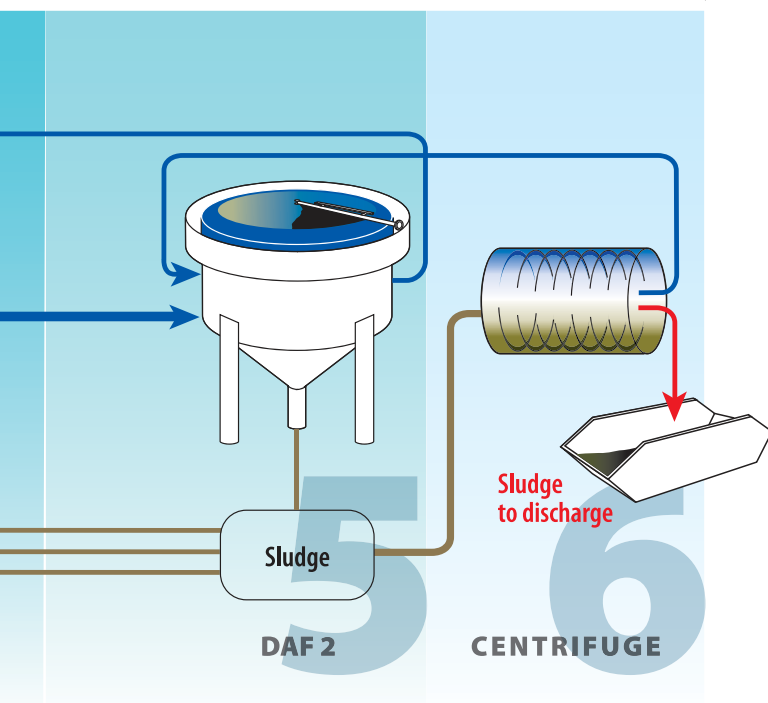
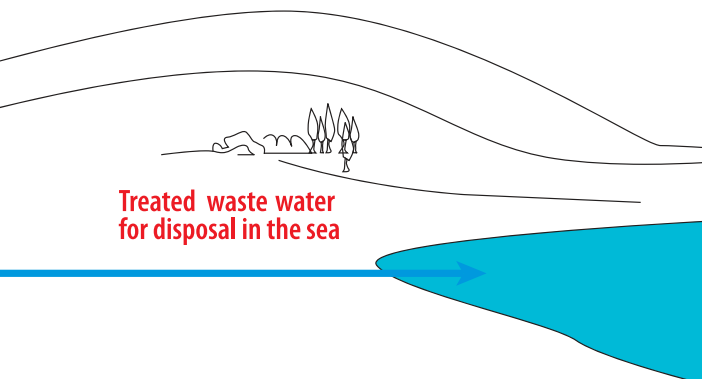
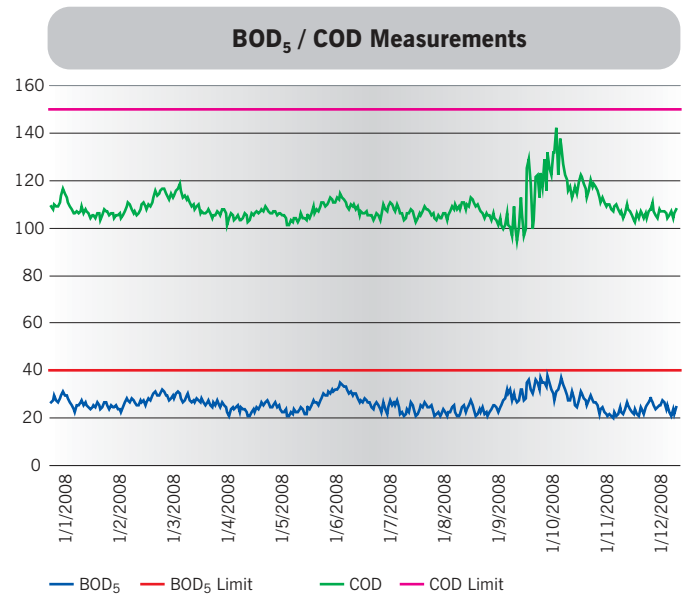
Industrial Wastewater Treatment Plant Outlet

Parameter	2006	2007	2008
Discharge (m ³ /day)	8,976	10,385	10,297
BOD ₅ (kg/day)	305	286	265
Suspended solids (kg/day)	143	208	174
Phenols (kg/day)	2.51	2.58	3.79

Terminology

BOD: Biological Oxygen Demand

COD: Chemical Oxygen Demand



Sanitary Wastewater Treatment Plant Outlet

Parameter	Average values 2008	Threshold limits
pH	7.8	6-9
BOD ₅ (mg/l)	15	<40
COD (mg/l)	37	<150
Suspended solids (mg/l)	10	<40

3.1.3 Solid Waste

Solid waste produced during Refinery operation is gathered and processed according to the following methods:

- Recycling (outside the Refinery premises)
- Recovery (outside the Refinery premises)
- Processing inside the Refinery premises
- Re-usage
- Final disposal (outside the Refinery premises)

The Refinery is aiming at the increase of recycling and re-usage of produced waste. The annual 2008 quantities of solid waste that were sent outside the Refinery's premises for treatment are shown in the following diagram.

SOLID WASTE MANAGEMENT (MT/year)

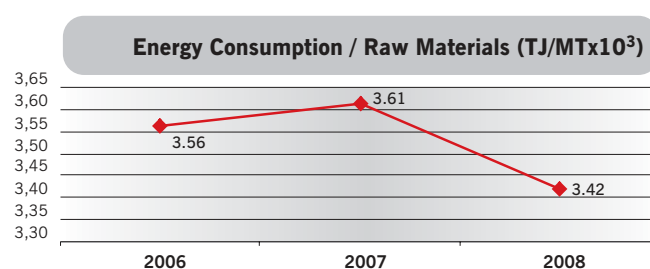
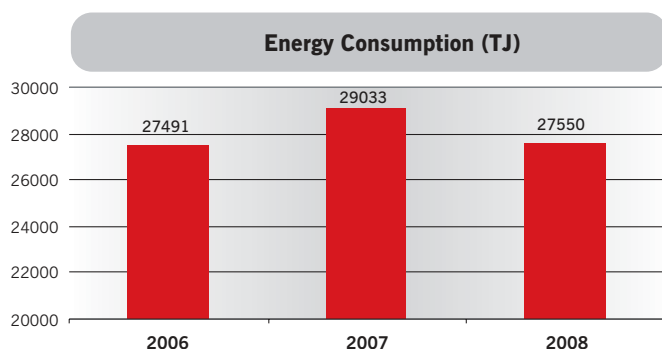
		2005	2006	2007	2008
50199	Waste not otherwise specified	468.90		115.00	120.60
160803*/ 160802*	Spent Ni-Mo catalyst	443.192		68.42	
50199	Inactive pellets	55.97			
160804	FCC spent catalyst	63.54	565.66	502.28	716.24
160601*	Lead batteries	8.05	1.98	0.14	2.52
160602*	Ni, Cd batteries	3.87	1.56		
161106	Recovery linings and refractories from non-metallurgical processes	104.44			
160103	Tyres at the end of their life cycle	5.94			
130208*	Other engine, transmission and lubricant oils	4.79	22.07	29.60	13.10
150103	Wood packaging	79.33	11.94	17.79	44.73
150101	Paper or cardboard packs	7.28	17.05	14.31	11.44
150102	Plastic packaging	2.34	9.24	17.60	
170407	Scrap materials	1,453.60	2,165.08	704.08	2,731.81
200301	Mixed municipal waste	604.30	686.20	721.96	633.03
190305	Stabilised waste other than those reported in the code 190304		260.34		
200136	Electrical and electronic equipment waste		7.16		
050103*	Sludge resulting from tank cleaning			301.93	
170409*	Metal Waste, contaminated by hazardous substances			15.41	
170903*	Other construction and demolition waste (including mixed waste) containing hazardous substances			21.67	
150110*	Packaging containing residues of hazardous substances or contaminated by them			8.22	3.05
160506*	Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals			0.04	0.10
200121*	Fluorescent tubes and other mercury-containing waste		0.06	0.34	
170503*	Soil and stones containing hazardous substances			21.24	
170605*	Construction materials containing asbestos			40.58	11.56
200133*	Mixed Batteries				0.187

3.1.4 Energy Consumption

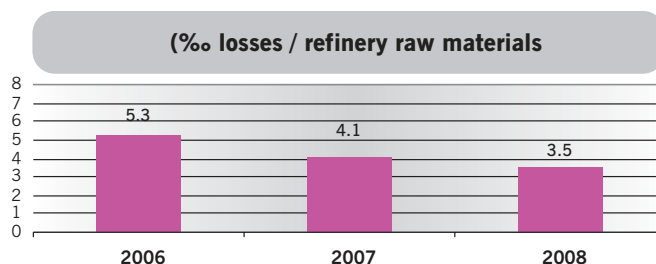
Energy consumption includes the consumption of fuel (liquid and gas fuel) during combustion and the consumption of electric power required for the operation of mechanical equipment.

2008 fuel consumption for Refinery operations amounted to 27,550 TJ. Total energy consumption has been reduced despite the production increase. This is a consequence of the

Company's Environmental Performance improvement, and the investment in new modern units that took place over the last two years. A temporary increase in energy consumption during 2007 was due to the installation of new units, not fully incorporated and functional, the increase of process complexity and the duplication of production of environmentally friendly fuels.



It is important to mention that total losses have decreased during the last three years, and they reach approximately 3.5 ‰ of the aggregate quantity of Refinery raw materials for 2008. This improvement is a result of the effort made to reduce flare losses as well as local energy losses.



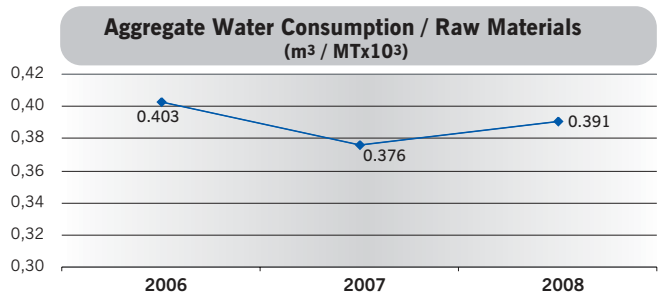
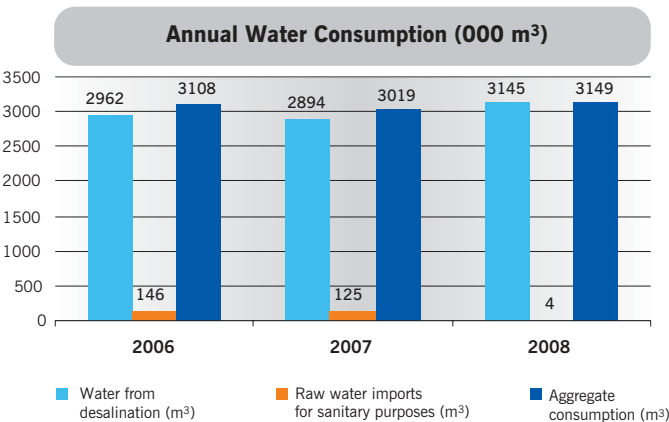
3.1.5 Water Consumption

Water used for the Refinery’s various operations is mostly obtained by sea water desalination, and much less by raw water carried by tank vehicles and vessels.

The water quantity that is annually consumed has been increased and that is due to the installation of new units, and the increase of production. It should be underlined that the water which is being used in the manufacturing process comes exclusively from processing of sea water, consequently, there is not any negative impact on natural resources of the area. As shown on the diagram the percentage of water

obtained from desalination is continuously increasing while simultaneously the imported raw water for sanitary purposes is decreasing (effectively down to zero). In addition it should be noted that in 2008 a reverse osmosis unit started operating resulting to a dramatic reduction of incoming sanitary water.

It is pointed out that in the context of the Company’s social contribution, quantities of water are granted free of charge, covering the water supply needs of nearly two hundred neighboring residences.



Quality Management and Control Certificates

3.1.6 Noise Pollution

Having set as a goal the reduction of environmental noise levels within and at the periphery of the Refinery premises, the Company has taken all the necessary measures which include the installation of silencers, as well as the purchasing of low noise level equipment.

A study on noise reduction in the Refinery's sulphur recovery units was completed in year 2008.

Installation of sound curtains at the aeration units of the wastewater treatment plant is currently under planning.

The levels of noise are monitored on a regular basis by conducting measurements at a large number of locations around the Refinery. The measurement positions are presented on the following Map.



Indicative measurements for 2008 are presented on the following table:

Locations	Measurements		
	June 2008 (dBA)	October 2008 (dBA)	Threshold Limits (dBA)
Perimeter of the Refinery (excluding the south side)	50.0 – 64.0	50.0 – 65.0	65.0
South side	50.0 – 55.0	50.0 – 54.8	55.0

4. Objectives

4.1 New objectives and programs

MOTOR OIL constantly implements new programs and actions aiming at improving its environmental performance, while it plans new objectives for the future. The objectives and programs that are planned for the following years and their time schedule are presented in the following table.

	2009	2010	2011
AIR			
Certification of the continuous measurement devices in the chimneys according to international standards, aiming at monitoring and reducing emissions and improving air quality		●	
Installation of deodorant plates at the fuel oil tanks (T-754, 755, 756, 757, 768, 777, 778)			●
Upgrading of the air quality station in the port, by monitoring additional pollutants (benzene)		●	
Odor monitoring in the Refinery greater area with use of a suitable device		●	
WATER			
Utilization of available inactive equipment in the industrial wastewater treatment system		●	
Installation of an on-line chloride meter at the exit of the sanitary waste treatment plant, in order to improve the monitoring of its operation	●		
SOIL / EARTH			
Reduction of the volume of solid waste stored in the Refinery and implementation of new alternative management methods:			
- Improving and removing the waste sludge		●	
- Alternative management and use of solid waste (catalysts, resins, discoloring earth) by the concrete industry (using a licensed disposal Company)	●		
- Finding an alternative way to manage the sludge from the bottom of the storage tanks, after processing in the Decanter		●	
- Completion of the research for managing and neutralizing sludge from the M-4000 wastewater treatment plant, so that it is suitable to use as an alternative fuel or to be disposed at a Sanitary Landfill		●	
OTHER			
Installation of covers at API IV and API V			●
Conduct a hydrogeological study to define the flow direction of the aquifer, in order to finalize the location of monitor and control drillings		●	

Registration / Next Environmental Statement

The Company is registered in the European System of Ecological Management and Audit Scheme EMAS. Moreover the Company is registered in the Greek Ledger of EMAS Organizations with registration number EL000067.

The present Environmental Statement constitutes the third Statement of the Company and concerns the year 2008. The next Environmental Statement will be the whole body of the Environmental Declaration and will be edited, verified and issued in July 2010. In that statement, environmental issues and the output of environmental programs for the years 2007-2009, will be described among other subjects.

Constantine B. Korkas, Head of the Integrated Management System, is responsible for editing the Environmental Statement.

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Activities Code NACE	DF.23.20
Number of employees	1023
Verifier	M. Chachali/BV Certification Hellas S.A.
Accreditation No	EL-V-0007 (246-2)
Range of Accreditation	NACE 19
Date of the next verification of the Environmental Statement	July 2010

Corinth, July 2009

Constantine B. Korkas
Head of the Integrated Management System