

# JOINT REPORT ON OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION OF THE UNIPETROL GROUP FOR 2011



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## Unipetrol group in 2011

### Basic economic data of the Unipetrol Group for 2011

Own capital (thousand CZK)	32,854,118
Basic capital (thousand CZK)	18,133,476
Revenues total (thousand CZK)	97,427,586
Economic result before taxes (thousand CZK)	-5,944,010
Economic result for the accounting period (thousand CZK)	-5,914,206
Dividends (CZK)	0
Average annual number of employees	3,899
Total investments (million CZK)	3,592

### Brief history of the Unipetrol Group

#### 1994

The establishment of the Unipetrol Joint Stock Company represented one of the gradual conception steps of the privatization process of the petrochemical industry. Unipetrol was supposed to unite selected Czech petrochemical companies into a formation, which could compete with strong supranational corporations. The majority shareholder of the company was the Czech government with 63% of the shares, represented by the National Property Fund. The remaining shares were owned by investment funds and small shareholders. Based on the initial concept, the government share was supposed to be eventually privatized. The following joint stock companies were gradually incorporated into Unipetrol: Kaučuk, Chemopetrol, Benzina, Paramo, Koramo, Česká rafinérská, Unipetrol Trade, Spolana and Unipetrol Rafinérie.

#### 2000

Starting in 2000, further important acquisitions were implemented. The following companies become a part of the established group: PARAMO, a.s., SPOLANA, a.s., UNIPETROL TRADE, a.s., and UNIPETROL RAFINÉRIE, a.s.

#### 2003

Merger of KORAMO, a.s., and PARAMO, a.s., with PARAMO, a.s. becoming the successor company. Česká Rafinérská switched to a refinery mode.

#### 2004

Contract between PKN ORLEN S.A. and the National Property Fund on the sale of 63% of the shares of UNIPETROL, a.s. is concluded.

#### 2006

Sale of the majority share of the subsidiary SPOLANA, a.s. to the Polish Zakłady Azotowe ANWIL S.A.

#### 2007

Sale of the subsidiary KAUČUK, a.s. to the Polish company Chemiczna Dwory S.A.

The new subsidiary UNIPETROL SERVICES, s.r.o. commences its business activities.

Change of the legal form of Unipetrol Doprava, Benzina and PETROTRANS from joint stock to limited liability companies.

Establishment of Butadien Kralupy, a.s., shareholders of which are UNIPETROL, a.s. (51%) and KAUČUK, a.s. (49%).

Merger of the subsidiaries CHEMOPETROL, a.s. and UNIPETROL RAFINÉRIE, a.s. with UNIPETROL RPA, s.r.o.

#### 2008

Right at the beginning of the year, the Board of Directors of Unipetrol approved an investment intention to expand the product portfolio of Unipetrol RPA by new monomers.

On June 26<sup>th</sup>, 2008, the General Assembly of Unipetrol decided on the payment of dividends from the undistributed profit from previous years in the amount of 3,200,558,584.60 CZK.

Unipetrol purchased 49,660 shares of Paramo and increased therefore its share in the company to 91.77%. In October, Unipetrol announced its intention to purchase the remaining shares from minority shareholders.

Based on the approved concept for the introduction of an integrated management system, a pilot project was implemented throughout the entire group between October 1<sup>st</sup> and 17<sup>th</sup>. As a part of the project, five selected companies were successfully certified (Unipetrol, Unipetrol RPA, Unipetrol Doprava, Unipetrol Services and Benzina).

## 2009

Unipetrol became the only shareholder of Paramo. Mr. Milan Kuncíř became the new general director of Paramo.

At the end of May, Unipetrol RPA permanently terminated the production of oxo-alcohols, which had been in operation since 1969.

In June, a contract on transporting and storing crude oil in Slovakia in 2009 was concluded between Transpetrol, Česká rafinérská and Paramo.

In September, Benzina came with a significant improvement of its fuel portfolio, introducing, as the first company on the Czech fuel market, a new formula for its premium diesel fuel Verva with cetane number 60; the company distributed this product to 130 gas stations.

During the fourth quarter of 2009, Benzina became to withdraw from the market the already outdated gasoline Speciál 91, which had been quickly losing its position. The company announced its plan to completely withdraw the product from the market by the second quarter of 2010.

On December 10<sup>th</sup>, the Supervisory Board of Unipetrol named Mr. Piotr Chełmiński, a member of the Board of Directors and the administration director, as the new chairman of the Board of Directors and general director of the company. Mr. Artur Paździor became a new executive of Unipetrol RPA.

The Unipetrol Group fulfilled the goals of the optimization plan, resulting in significant savings related to the fixed and variable expenses as well as investment expenses of the group.

## 2010

UNIPETROL, a.s. and Unipetrol RPA decided about transferring their respective shares of Celio to TICATANOR, s.r.o. and B.E. Fin S.A. Celio is involved in waste management and its sale corresponded to the strategy of the Unipetrol Group, objective of which was to focus more on individual strategic segments.

The joint enterprise of Unipetrol and Synthos Kralupy, Butadien Kralupy a.s., commenced its production in a new butadiene unit. The investment amounting to 1.2 billion Czech crowns replaced the existing production unit operated by Synthos Kralupy. The new unit increases the annual production capacity from the original 90 to 120 kilotonnes, which puts the company among the 10 largest producers of butadiene in Europe.

Once again, Unipetrol concluded a cooperation contract with the Institute of Chemical Technology in Prague. The Unipetrol Group had been a strategic partner of the institute for 9 years.

The time plan for closing the T200 heating plant in the Chempark in Záluží was introduced. The T200 heating plant represents an outdated electricity and steam production facility and its operation – starting in 2012 – will not comply with the appropriate legislative requirements any more. After its closure, the energy service unit of Unipetrol RPA will continue to operate the newer T700 heating plant.

Mr. Mariusz Kędra became a new member of the Board of Directors and the financial director of Unipetrol. Mr. Wojciech Ostrowski, the former financial director of the Unipetrol Group, left this position after three years.

Unipetrol introduced its intention to build a teaching and research center UniCRE. The center, which will incorporate research and teaching activities, should be built during the next few years on the industrial premises in Záluží. The total cost for building the center is stated at almost 800 million Czech crowns. European Union will co-fund the project by the amount of 600 million Czech crowns.

Benzina commenced its cooperation with the Burger King fast food chain, which opened its first franchise on a highway in the Czech Republic on the third kilometer of highway D11 in the direction heading from Prague.

Mr. Paweł Kania became a new executive of Benzina.

## 2011

As a part of restructuring the refinery segment, two new subsidiaries of PARAMO, a.s. were established in the beginning of the year: Paramo Oil, s.r.o. and Paramo Asphalt, s.r.o.

As a part of the restructuring process of the Unipetrol Trade Group, the liquidation of UNIPETROL TRADE, a.s. was completed on September 27<sup>th</sup>, 2011.

At the end of the third and beginning of the fourth quarter, the planned shutdown, conducted regularly every four years, of the refinery and petrochemical operations in Litvínov took place.

In the Czech Republic, the Unipetrol Group became the general partner of the International Year of Chemistry 2011, declared by UNESCO and the International Union of Pure and Applied Chemistry.

Benzina launched the first completely self-serviced gas station on the Czech market called Expres 24.

Three companies of the Unipetrol Group retained their certification on responsible approach to business activities in the area of chemistry, awarded by the Association of Chemical Industry of the Czech Republic. As a result, these companies, Unipetrol, Unipetrol Doprava and Unipetrol RPA are entitled to use the Responsible Care logo.

In November, the production of the high-density polyethylene in Unipetrol RPA exceeded 5 million tons. The company has been producing polyethylene since 1976 and currently produces 950 to 1,000 tons of polyethylene per day.

PARAMO introduced a new line of performance motor oil Mogul Professional.

PARAMO acquired the European ETA technical certificate for the Gumoasfalt ("Rubber-asphalt") hydro-insulation roof systems.

## Introduction of the Unipetrol Group

The subject of the business activities of the group includes refinery and petrochemical production and sales in the Czech Republic and Central Europe. The companies of the group especially produce and sell refinery products, chemical and petrochemical products, polymers, fertilizers and special chemicals. The group also operates its own transportation services and finances its own research and development. Unipetrol is a leading refinery and petrochemical group in the Czech Republic and an important player in the Central and Eastern Europe. The group focuses on the following three strategic business segments:

- Refinery processing of crude oil and wholesale of refinery products,
- Petrochemical production,
- Retail of motor fuels.

UNIPETROL, a.s. is the only owner of the following companies:

- UNIPETROL RPA, s.r.o., producer and distributor of refinery, petrochemical and agrochemical products,
- BENZINA, s.r.o., operator of the largest gas station network in the Czech Republic,
- UNIPETROL DOPRAVA, s.r.o., professional railroad carrier company of chemical, petrochemical and other products, and provider of related services (99.88% of its shares is owned by UNIPETROL RPA, s.r.o.),
- PARAMO, a.s., the biggest manufacturer of asphalts, lubrication and heating oils, fuels and other refinery products,
- UNIPETROL SERVICES, s.r.o., support center for all companies of the group.

Other important assets:

- ČESKÁ RAFINÉRSKÁ, a.s., (51.22%), jointly owned with ENI INTERNATIONAL, B.V. and Shell Overseas Investment B.V.; the biggest crude oil processor in the Czech Republic for a wide range of products with an annual capacity of 8.8 million tons.

The Unipetrol Group also includes two research and development companies, which achieve excellent results with significant application values:

- Výzkumný ústav anorganické chemie, a.s. (VÚAnCh), ("*Research Institute of Inorganic Chemistry*"),
- POLYMER INSTITUTE BRNO, s.r.o.

The main products produced by the Unipetrol Group are refinery and petrochemical products.

Refinery products: car gasoline, diesel fuel, light heating oil, aviation fuel, LPG, asphalts, primary gasoline, lubrication and heating oils.

Petrochemical products: ethylene, propylene, C<sub>4</sub> fractions, benzene, high-density polyethylene, polypropylene, ammonia, urea, Chezacarb.

## Business profile of the main subsidiaries of the Unipetrol Group

### UNIPETROL RPA, s.r.o.

A logic continuation of the implementation of the new management model, to which the Unipetrol Group has been gradually switching since the beginning of 2007, is the merger by fusion of CHEMOPETROL, UNIPETROL RAFINÉRIE and UNIPETROL RPA into Unipetrol RPA (refineries, petrochemistry, agrochemistry).

The main advantages of the fusion are especially a simplification of the flow of intermediate products within a single company and an improved utilization of existing synergies. Another positive factor is a more efficient process of internal purchases and sales of the group's products inside of the group. Moreover, this change will allow for a stricter control over the entire production and sale process, from purchases of crude oil to the customer care. The fusion resulted in a compact unit, in which organizational, personnel, administrative and logistic structure of individual activities becomes simpler.

The company is divided into production, business and service units.

#### CHEMICAL PRODUCTION UNIT

The unit operates the following production units:

- Ethylene unit,
- Polypropylene production facility,
- Polyethylene production facility,
- Chezacarb production facility,
- Mazut gassing production facility,
- Ammonia and urea production facility;
- Gas compression and distribution facility.

Furthermore, the unit secures the investment process for the entire company and activities of the company firefighting unit and control room.

#### ENERGY SERVICES UNIT

The unit supplies the entire premises with energies (electricity, steam) and water and secures waste water treatment for the whole complex.

#### SUPPLIER CHAIN UNIT

The unit secures logistics for plastics, urea and Chezacarb.

#### REFINERY UNIT

The unit conducts business in the area of crude oil processing. Pursuant to the ownership rights of Unipetrol, it plans and manages crude oil transformation in Česká Rafinérská into final products in accordance with the needs of related productions within the group. It is the most important entity on the Czech wholesale market of crude oil products. The main subjects of its business activities are:

- Complex procurement of raw materials for petrochemical productions of the Unipetrol Group,
- Wholesale of motor fuels and other refinery products,
- Crude oil purchases for refinery productions of the Unipetrol Group,
- Optimization of the relations between refinery and petrochemical productions with emphasis on a maximum possible utilization of the synergies of individual technological units,
- Optimization of refinery productions of the Unipetrol Group.

*Main products of the unit:*

Motor fuels (lead free gasoline Normal 91, Super 95, Super plus 98, aviation kerosene, motor diesel), heating oils (extra light heating oil, heavy heating oil R2), asphalts, road asphalts, liquidized crude oil products, propane, propylene, propane-butane, LPG, butane, N-butane, butane - butene fraction, oil hydrogenate products, stabilized oil hydrogenate products, other refinery products, primary gasoline, liquid sulfur, MTBE.

#### UNIT OF MONOMERS AND AGROPRODUCTS

The unit conducts business in the area of petrochemical products, ammonia and urea. It plans and manages production that follows crude oil processing and delivers semi-finished products for the consequent segment to polyolefin. It is a key supplier of ethylene, propylene, benzene, ammonia and other chemical and petrochemical raw materials for other chemical companies in the Czech Republic and in Central Europe. Main activities:

- Securing raw materials for the production of polyolefin in the Unipetrol Group,
- Sale of petrochemical products, ammonia and urea,
- Development and the strategy of petrochemical and chemical productions.

*Main products of the unit:*

Olefins and aromatics, ethylene for polymerization, propylene for polymerization, petroleum benzene, C<sub>4</sub> fraction, C<sub>5</sub> fraction, C<sub>9</sub> fraction - re-distilled, naphthalene concentrate, pyrolytic heating oil, agrochemicals, ammonia,



technical ammonia water, urea, soot and sorbents, highly conductive soot.

#### POLYOLEFINS UNIT

The unit conducts business in the segment of plastic materials - polyolefin. It plans production for the polypropylene and high-density polyethylene production facilities and secures sale of the finished PP and HDPE products. Furthermore, in cooperation with the research and development base at the Polymer Institute in Brno, BU III secures and participates in the modification process of the existing and in the development of new polyolefin products. BU III is the most important supplier of polyolefin on the market in the Czech Republic and, considering its 5% of the European capacities of HDPE and 2% of PP, an important entity especially in Central Europe. Main activities:

- Sale of the PP and HDPE products,
- Coordination of the research and development in the area of polyolefin, implemented at the Polymer Institute in Brno,
- Providing technical service and consultations to the existing as well as potential customers.

*Main products of the unit:*

Polyolefin, high-density polyethylene (HDPE), polypropylene.

#### **ČESKÁ RAFINÉRSKÁ, a.s.**

ČESKÁ RAFINÉRSKÁ, a.s., in Litvínov is a production company that processes crude oil and operates refineries in Litvínov and Kralupy nad Vltavou. It is a joint company owned by the following three shareholders: Unipetrol (51.23%), Eni (32.44%) and Shell (16.33%).

The main products expedited from both refineries are car gasoline, motor diesel, aviation fuels, heating oils, liquid gases (LPG), asphalts, raw materials for petrochemical production and for the production of lubrication oils and substances for further industrial use.

Since August 2003, Česká Rafinérská has been a reprocessing refinery, which means that it processes crude oil delivered by its owners or its domestic trading companies. They sell individual products on the domestic as well as international markets in the quantity corresponding to their respective shares.

#### **BENZINA, s. r. o.**

As of December 31<sup>st</sup>, 2011, the company operated 323 gas stations with a wide offer of fuels with additives. Selected segment of the company offers the VERVA premium fuels and also an extensive assortment of other goods, refreshments and services. During 2006-2009, this network was gradually renovated and modernized. The network is currently profiled into two segments, a premium segment, represented on the domestic market by 112 Beznina Plus gas stations, and the standard Benzina portfolio. In 2011, the number of the premium Benzina Plus gas stations was increased by two. As a part of the innovation process, a new, service-free gas station was put into operation under a new business name Expres 24 in Vysoké Mýto with an assortment of fuels with additives and a possibility to purchase them using credit cards as well as cash.

The company acquired more than 14% of the market share. Considering the situation and development of the macroeconomic factors of the Czech economy, the development of the company's market share corresponds to the difficult situation on the market. The overall number of all gas stations on the market grew slightly - by 1.1%.

#### **PARAMO, a.s.**

The joint stock company PARAMO processes crude oil and makes refinery and asphalt products and lubrication and procedural oils, including related and auxiliary products. Since 2003, the refinery has been purchasing and processing oil hydrogenates and hydrocrackates. The company uses the developed intermediate products for the production of basic and lubrication oils with a low content of sulfur. The company sells its products especially on the domestic market.

The most important business and economic product made by the refinery is motor diesel. As a result of the gradual reduction of the asphalt production in Česká Rafinérská, PARAMO will become the main asphalt producer in the Czech Republic. The advantage of the company is its wide assortment of products and the state of the art basic Biturox unit in the asphalt area in the region. This unit was put into operation during the last quarter of 2006.

#### **UNIPETROL SERVICES, s.r.o.**

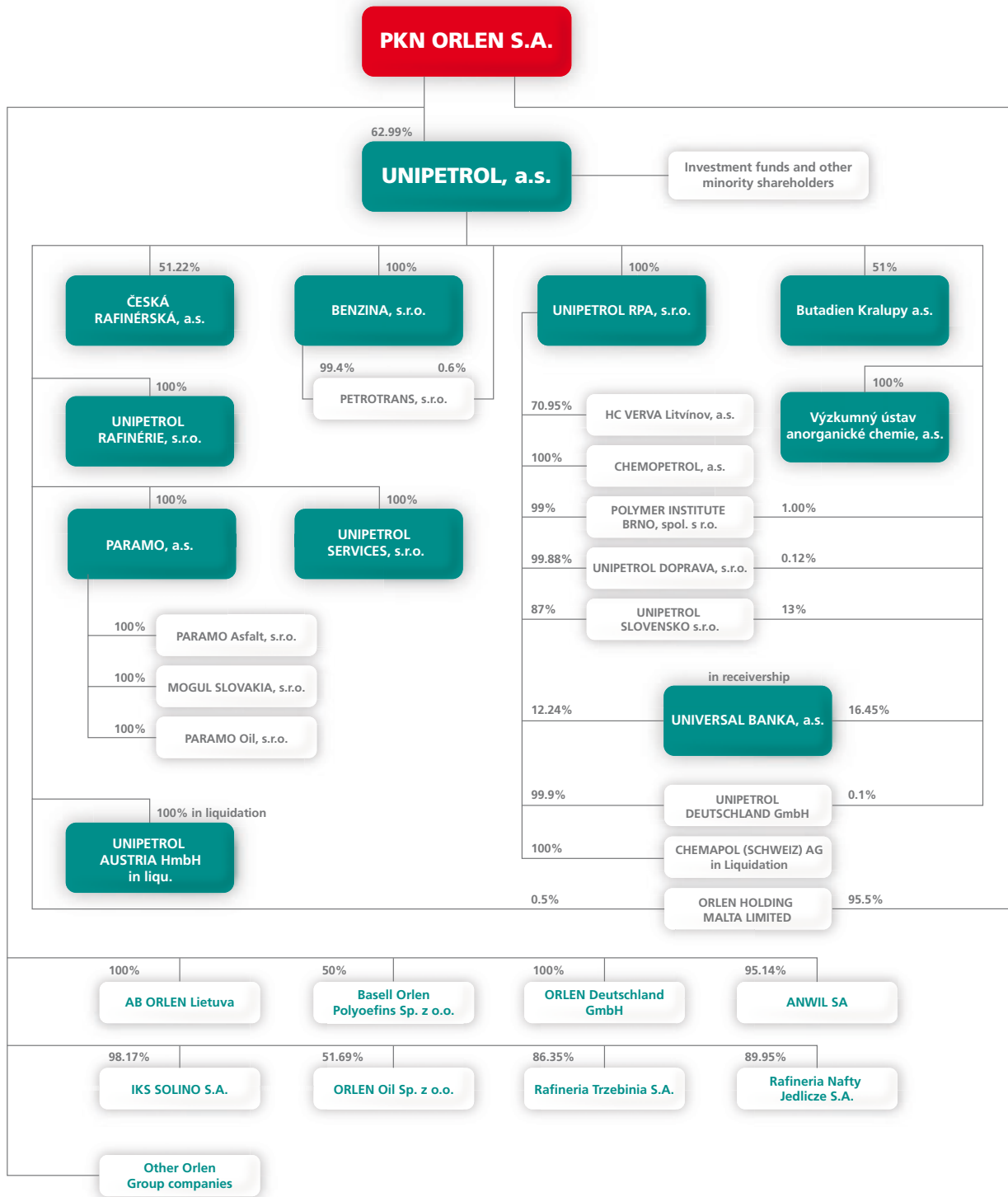
The Shared Service Centre (SSC) was established on January 1<sup>st</sup>, 2007. It was created by transferring a part of the administrative and support activities from the following companies: Unipetrol, Chemopetrol, Unipetrol Doprava, Benzina and Unipetrol Trade. Later, it was incorporated into the newly established UNIPETROL

SERVICES, s.r.o. The company has been gradually increasing the number of the serviced companies within the UNIPETROL Group as well as outside of it.

The mission of Unipetrol Services is providing services to the other companies in the group as well as to companies outside of the group and to make the provided services more efficient and reduce their cost.



Asset structure of UNIPETROL, a.s. as of December 31<sup>st</sup>, 2011



## Joint policy on responsible business activities in the area of chemistry and integrated management of occupational health and safety, protection of the environment and quality

In November 2007, the Board of Directors of UNIPETROL, a. s. approved the “Joint policy on responsible business activities in the area of chemistry and integrated management of occupational health and safety, protection of the environment and quality”, which represents a continuation of the previous “Joint environmental policy of the Unipetrol Group” from 1999 and which reacts to the new structure of the group and new initiatives of the Corporate Social Responsibility (CSR).

### **Policy on responsible business activities in the area of chemistry and integrated management of occupational health and safety, protection of the environment and quality**

The Unipetrol Group is one of the most important Czech industrial corporations and a national leader in the field of crude oil processing and petrochemistry.

The group strives to achieve long-term profitability, competitiveness and high quality of its products and services, high level of safety and environmental responsibility in its production, commercial and logistic activities that include refinery crude oil processing, petrochemical and agrochemical production, distribution, services in the area of railway transportation and transport, wholesale and retail of motor fuels, oils and other products.

As a member of the industrial ORLEN Group, the Unipetrol Group complies with the principles of the Responsible Care Global Charter, sustainable development and social responsibility.

The Unipetrol Group considers it to be its priority to develop, produce and transport products with minimal risks of unfavorable impacts on human health and the environment. To limit potential risks, Unipetrol has introduced the “Product Stewardship – Product Supervision and Care”, which consists of testing products, providing information to consumer chains about the wide spectrum of given product characteristics, and adopting risk management measures in the areas where potential occupational health and safety and environmental risks exist.

The group has introduced and maintained an integrated management system, part of which is an occupational health and safety system, environmental management system and quality management system. In compliance with the integrated management system, the Unipetrol Group has undertaken to comply with the following resolutions:

#### **Product supervision and care**

- To develop, produce and distribute products with minimal risks of negative impacts on human health and the environment;
- To test products, provide customers, directly or indirectly via retail chains, information about given wide spectrums of product characteristics, and to adopt risk management measures in the areas where potential occupational health and safety and environmental risks exist;

#### **Compliance with the legal and other requirements related to occupational health and safety, quality and protection of the environment:**

- To comply with the requirements of legal and other requirements related to occupational health and safety, quality and protection of the environment, by which the company is bound;
- To introduce the best available technologies wherever it is suitable and efficient;

#### **Integrated management system**

- Regular inspections of the suitability and adequacy of the integrated management system policy;
- To monitor, measure and evaluate processes and specified measures in order to achieve continuous improvement of the efficiency of the integrated management system;;
- To record discrepancies, to analyze causes of such discrepancy processes and to adopt appropriate corrective and preventive measures;
- To continuously improve performance in the area of occupational health and safety, protection of the environment and quality management of products and services;
- To involve suppliers (physical persons and legal entities) in the management system, to acquaint them with the principles and procedures used by the company and to require compliance with them;
- To secure necessary sources for enforcing and maintaining the integrated management system and financing individual activities in the area of its scope;

#### **Preventive approach**

- To prevent the need to solve consequences of extraordinary events by applying preventive approach in the areas of occupational health and safety, protection of the environment, quality of products and services and protection of assets; to maintain and test rescue and emergency systems;
- To operate individual devices in a way that is safe and protects health of employees, suppliers and other companies and the population of the region, and that causes minimal impacts on the environment, quality of products and their value;

#### **Limiting risks related to occupational health and safety and to the environment**

- To apply a prevention system and risk management for the area of occupational health and safety and the environment with the objective to minimize negative impacts of such risks as well as accidents and to compensate for damages caused by such accidents on health, the environment or assets;
- To inform the public about the existence of any health, safety and environmental risks and about the given adopted safety and preventive measures;
- To continuously identify threats, to evaluate risks and health and environmental problems, to adopt and introduce measures for their elimination or limitation, to minimize negative impacts of arisen emergency situations;
- To lead employees to prevent negative impacts of their activities on health, work safety, the environment, product quality and assets;

#### **Open approach**

- To exercise an open approach towards all involved parties;
- To maintain contact with all involved parties and to support an open approach towards the public and especially towards the adjoining towns and communities;

#### **Evaluation of negative impacts on safety, health and the environment**

- To evaluate negative impacts on health, safety and the environment prior to commencing a new activity, a project or changes or prior to closing an operation down, and to apply results of such evaluations in a way as to minimize such negative impacts;

#### **Logistic and transportation services**

- To provide logistic and transportation services while complying with high standards of safety, quality and environmental performance; to introduce and maintain the European "Safety & Quality Assessment System" (SQAS) for the transportation services and the evaluation system for cleaning transportation devices – the European Cleaning Document (ECD);

#### **Rectification of old environmental burdens**

- To implement a long-term rectification program for rectifying old environmental burdens;

#### **Customer orientation**

- To maintain a high quality of products and services, provided it is possible and efficient, and to adjust product and service specifications in accordance with to the requirements of individual customers;
- To monitor information related to the perception of customers, making sure their requirements are being fulfilled. To fulfill customers' needs and their expectations, including requirements of other involved parties (suppliers, employees and owners) with the objective to achieve their satisfaction and to acquire competitive advantages;

#### **Employee training and education**

- To educate, motivate and increase awareness of employees, suppliers and other business partners with regard to security, occupational health and safety, the environment and quality of the provided products and services;

#### **Protection of company assets**

- To preserve and protect the company assets. To adequately insure risks that cannot be completely removed with the objective to minimize negative impacts on the company assets.

## Activities of the UNIPETROL group in the area of the protection of the environment in 2011

### Environmental investments

Environmental investments are defined as investment actions initiated directly by the requirements of the legal regulations related to the protection of the environment. They are closely related to the application of the integrated prevention of pollution. Some environmental investments can include even other investment actions with a positive effect on the environment.

In 2011, the following important environmental investments were implemented within the group:

#### Česká rafinérská

In 2011, investment projects in the area of the protection of the environment amounting to a total of 241 million CZK were implemented. The following are the most important projects:

- Renovation of the waste water treatment plant in Kralupy - in 2011, works continued on the renovation of the waste water treatment plant in Kralupy, which is required by the valid IPPC. The project is in the project documentation preparation stage. The project is designed in a way as to comply with the requirements of the best available technologies (BAT).
- Renovation of the sewer system Kralupy – 2 projects were prepared for the renovation of the existing sewer system. Parts with a possible occurrence of MTBE were selected and solved preferentially. This project was already implemented and completed. The second project, which applies to the remaining parts of the sewer system, is currently in the project documentation preparation stage.
- HOPV expansion – the project addresses the issue of expanding hydraulic protection of underground water at the northeastern part of the premises of the Kralupy refinery. The project is designed in a way as to secure protection against penetration of substances dissolved in water. As a part of the project, a system consisting of a catchment drain, sub-horizontal boreholes and absorption units will be installed.
- Preparation of a project for installing a device for cleaning some of the drawn underground water at the Kralupy refinery commenced. The project is related to the expansion of the hydraulic barrier.
- A project for improving reliability of the HOPV device commenced.
- The flaring system at the Litvínov refinery was modified with the objective to eliminate potential safety hazards.
- The continuous emission analyzers at the sulfur production facility in Litvínov were replaced and preparation of a project for installing continuous emission analyzers at the sulfur production facility in Kralupy commenced.
- The first part of a project for modernizing the existing railroad filling ramp in Kralupy was implemented.

#### Unipetrol RPA

In 2011, investment projects in the area of the protection of the environment amounting to a total of 24.6 million CZK were implemented. The following are the most important projects:

- Renovation of the sewer system, including the shafts at the Ethylene unit.
- Safety overflows of the sand traps of the rain water sewer system at the Petrochemical unit were furnished with a water level detection system – signaling overflows over the safety overflow into the Bílý Creek.
- Measures for minimizing pollution of the unified sewer system of the facility by the means of deflecting some of the waste water from the Ethylene unit production facility and its treatment in the house waste water treatment plant.
- Continuation of preparation works for the Revitalization of the Mračný Creek project – installation of pipes under the lagoons in Růžodol.
- As a part of emission motoring, a new measuring device was installed at the Ethylene unit with the objective to secure the required volume of heating oil for 4 CO<sub>2</sub> emission sources. At the emission degassing production facility, 3 new measuring devices were installed with the objective to monitor the volume of CO<sub>2</sub> – one device for CO<sub>2</sub> emissions to the air and two devices for delivering CO<sub>2</sub> to consumers on the premises of the Chempark in Záluží).

As a part of the process for complying with the conditions of the integrated permit, the Study of the Hazardous Profile on the Bílina River was prepared. Based on this study, a new emergency profile for catching leaked hydrocarbons floating on the surface will be built in 2012. In relation to this study, another study was prepared – Study for Eliminating Pollution of the Bílina River by Implementing Cleaning Devices on the Unified Sewer System on the Premises of UNIPETROL RPA. This study focused on the evaluation of the existing system for final waste water treatment on the unified sewer system. The study proposed measures applicable to the unified sewer system with the objective to increase the volume of the pollutants caught during emergency situations as well as otherwise.

Several other measures with a positive impact on the environment were implemented, which were financed within

the frame of device maintenance expenses. These measures especially include repairs of sewer systems, handling areas and reservoirs.

Paramo

In 2011, the following investment projects in the area of the protection of the environment amounting to a total of 6.9 million CZK were implemented:

- Completion of the renovation of reservoirs N11 and N12 with heating oil for the operation of the energy system at the economic center in Pardubice at the end of 2010 an beginning of 2011,
- Commencement of the “Renovation of Storage Reservoirs, including Implementation of the Emergency Reservoir PS 0404” investment project, co-financed from the Environmental Operation Program at the Kolín economic center.

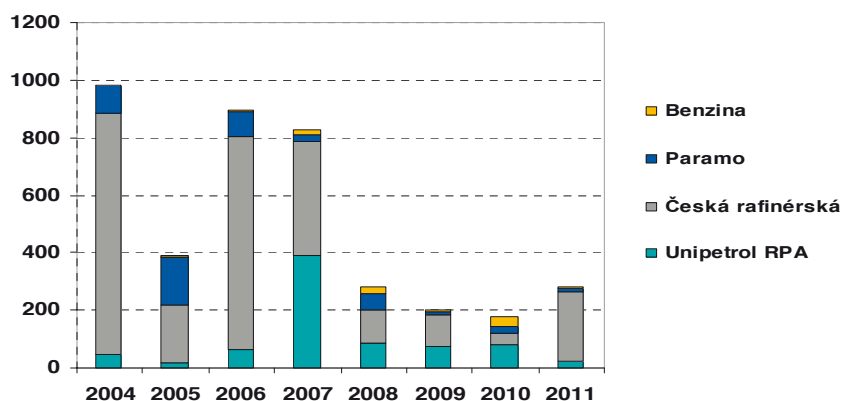
Benzina

In 2011, investment projects in the area of the protection of the environment amounting to a total of 7.9 million CZK were implemented. The following are the most important projects:

- Replacement of the outdated water treatment plants of the car wash units of 20 different gas stations by new and more modern water treatment plants,
- Waste water connections to the public sewer system at the following gas stations: Plzeň-Křimice, Nový Bydžov, Prachatice-Krumlovská, Turnov-Valdštejnsko, Česká Kamenice, Jičín – Robousy and Přelouč,
- Replacement of unsuitable sewerage water treatment plants at the following gas stations: Bečov nad Teplou, Rumburk – Východní and Příbram – Dlouhá Lhota. Removal of the existing sewerage water treatment plants at the following gas stations: Prachatice-Krumlovská and Nový Bydžov,
- Securing a drinking water source at the Rynoltice gas station,
- Cleaning the suspended reservoirs used for operation of a waste water plant at the Hradec Králové-Brněnská gas station,
- Water management measures of the fuel storage tanks at the Polička gas station.

**Investment expenses related to the protection of the environment within the group (million CZK/year)**

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	46	17	65	389	85	76	81	25
Česká Rafinérská	841	200	740	397	116	105	40	241
Paramo	92	168	87	26	59	14	20	7
Benzina	1	5	6	16	22	5	35	8
<b>Unipetrol Group</b>	<b>980</b>	<b>390</b>	<b>898</b>	<b>828</b>	<b>282</b>	<b>200</b>	<b>175</b>	<b>281</b>



**Summary of environmental investment and measures of individual companies implemented in 2011**

Measure	Impact of the environment
<b>Unipetrol RPA</b>	
Study on the replacement of the device at the energy block of EJ	Reduction of air pollution emissions, compliance with the IED conditions, improved efficiency
Sewer system renovation at EJ	Renovation and modernization of the industrial sewer system with the objective to minimize waste water leaks
Stable emergency profile study – protection of the Bílina River	Will allow for a fast and efficient catchment of emergency pollutants at the Bílina River and will prevent further spread of the pollutants in the river stream, significantly reducing negative impacts of a given accident
Measuring CO2 at the ZM production facility	More accurate monitoring of the CO2 emissions
Measuring heating oil at EJ	Measuring heating oil at EJ
Segregation of sewerage water - project documentation	By leading sewage water to a biological treatment plant, the volume of biologically treated water will increase and the volume of discharged pollutants will decrease
Sludge water removal from the PCH waterworks and MČOV	By leading sludge water directly to the industrial sewerage system eliminates possible leaks of this water
Adjustment of the sand traps at VVH	Raising the overflow edge with the objective to reduce the number of water overflows from the sand traps to the river and detection of their the overflows
New air compressor at III	Improved stability of the technological operation
Revitalization of the Mračný Creek	Installing lining at the piped part of the creek with the objective to prevent leaks of harmful substances from the liquid waste lagoon areas to the piped part of the creek
<b>Česká Rafinérská</b>	
Extension and completion of the HOPV system	Sanitation of polluted underground water and protection of surface and underground waters and the soil
Revamping of ČOV in Kralupy	Increased efficiency and effectiveness of the waste water treatment process
Modernization of the railroad filling ramp in Kralupy	Protection of surface and underground waters and the soil
Repair of the sewer system of oiled waters in Kralupy, stages 1 at bl. 41, 26 and 17	Protection of surface and underground waters and the soil
Repair of the sewer system of oiled waters in Kralupy, stage 2	Protection of surface and underground waters and the soil
Repair of the sewer system of oiled waters at bl. 34 in Litvínov	Protection of surface and underground waters and the soil
Adjustment of the flaring system in Litvínov	Improved safety and air protection
Replacement of the continuous analyzers of the Claus emission unit in Litvínov	Improved monitoring efficiency
Preparation of the installation of the continuous emission measuring system of the Claus unit in Kralupy	Improved monitoring efficiency
Improved reliability of the HOPV device	Protection of underground water
<b>Paramo</b>	
Completion of the renovation of reservoirs N11 and N12	Elimination of the threat to underground water from emergency leaks of mazut
Renovation of the storage reservoirs, including implementation of the emergency reservoir PS 0404-HS in Kolín	Elimination of the threat to underground water from emergency leaks of oil
<b>Benzina</b>	
Replacement and completion of water treatment plants (gas stations in Bečov, Příbram-Dlouhá Lhota and Rumburk) and connections of waste water to the municipal waste water treatment plant (gas stations in Plzeň-Křimice, Prachatic, Nový Bydžov, Turnov and Česká Kamenice)	Reduction of emissions to surface water
Renovation of the sealed handling areas	Reduction of the threat to underground water and the rock environment
Renovation of drinking water sources (gas stations in Rynoltice, Olomouc-Žerůvky and Volyně)	Reduction of the health threats to gas station personnel and customers by harmful water

## Expenses related to the protection of the environment

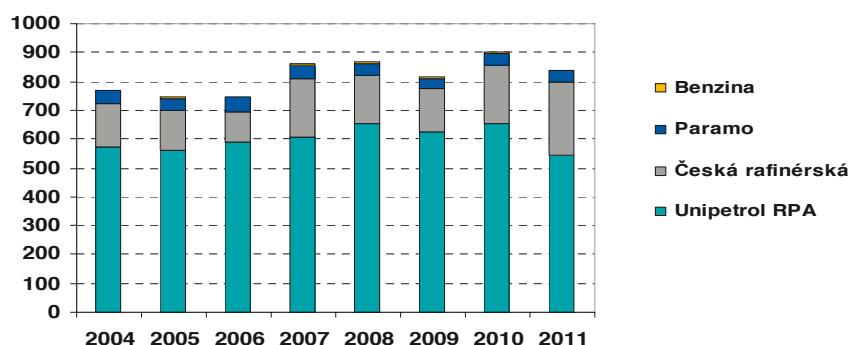
### Environmental operation expenses

Environmental operation expenses are expenses related to the operation of devices for the protection of the air, waste water treatment, waste management, operation of environmental management systems, monitoring of substances discharged to the environment, evaluation of negative impacts on the environment (EIA process), integrated pollution prevention and other related environmental activities.

In comparison with the previous decade, the newly installed modern technologies with a high degree of raw material conversion, reduced volume of waste and a high energy efficiency have led to an overall reduction of the environmental operation expenses. The amount of the environmental operation expenses during the last decade has been, more or less, stable. The following summary demonstrates the development of these environmental operation expenses during 2004 – 2011.

### Operational expenses for the protection of the environment within the group (million CZK/year)

Year	2004	2005	2006	2007	2008	2009	2010	2011
UNIPETROL RPA	575	561	590	606	654	624	652	544
Česká Rafinérská	147	139	106	203	166	144	202	254
PARAMO	47	38	47	48	44	35	44	40
BENZINA	-	5	5	5	5	5	6	3
<b>UNIPETROL Group</b>	<b>769</b>	<b>743</b>	<b>748</b>	<b>862</b>	<b>869</b>	<b>808</b>	<b>904</b>	<b>841</b>



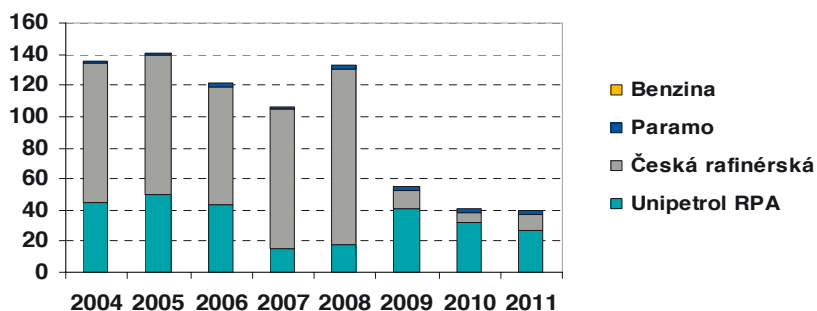
### Overall expenses related to the protection of the environment

Overall expenses related to the protection of the environment within the Unipetrol Group include the cost of environmental investments, operational expenses related to the protection of the environment, cost of sanitation of old environmental burdens, fees for air pollution, discharging waste water, storing waste at dumping sites and creating reserves for restoration of dumping sites and compensation for emission damages caused to forests. Development of the fees and payments for polluting the environment and of the overall expenses spent on the protection of the environment during 2004 – 2011 is showed in the following summary. The drop in the fees and payments for 2009 in comparison with 2008 in the case of Česká Rafinérská was caused by a methodology change.

### Fees and payments for polluting the environment by the group (million CZK/year)

Year	2004	2005	2006	2007	2008	2009	2010	2011
UNIPETROL RPA	45	50	44	16	18	41	32	27
Česká Rafinérská	89	89	75	89	113	12	7	10
PARAMO	2	2	2	1	2	1,7	2,5	2,6
BENZINA	-	0	0	0	0	0	0	0
<b>UNIPETROL Group</b>	<b>136</b>	<b>141</b>	<b>121</b>	<b>106</b>	<b>133</b>	<b>55</b>	<b>41</b>	<b>40</b>

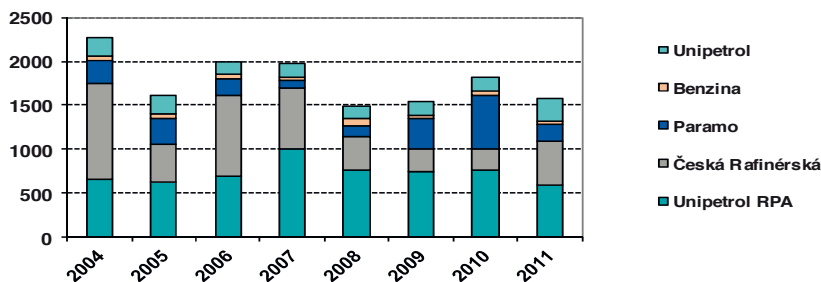




In 2011, the overall expenses related to the protection of the environment within the Unipetrol Group amounted to a total of 1.6 billion CZK. The increase of the overall expenses during 2009 and 2010 in comparison to 2008 was mainly caused by commencement of new projects in the area of sanitation works at both locations of PARAMO, a.s. The drop in 2011 was also significantly influenced by the progress of the sanitation works at both locations of PARAMO, a.s. The increase of the expenses of Česká Rafinérská was caused by an intensified investment activity in the area of environmental projects.

**Overall expenses related to the protection of the environment within the group (million CZK/year)**

Year	2004	2005	2006	2007	2008	2009	2010	2011
UNIPETROL RPA	666	628	699	1011	757	741	764	596
Česká Rafinérská	1,077	428	921	689	395	261	249	505
PARAMO	260	291	176	85	119	346	591	179
BENZINA	41	36	26	38	73	31	67	39
UNIPETROL	206	202	147	148	144	159	148	256
UNIPETROL Group	2,250	1,585	1,969	1,971	1,488	1,538	1,820	1,576



## Management systems

Management systems represent important factors for the protection of the environment, occupational health and safety and fire protection. The companies of the Unipetrol Group have put in place the following certified systems - Environmental Management System (EMS), Health and Safety Management System (HSMS) and Quality Management System (QMS) – as a guarantee of a systematic approach to the protection of the environment and other areas. The systems have been certified pursuant to the following international standards: ISO 14001, OHSAS 18001 and ISO 9001.

At the end of 2011, the IMS re-certification audit took place at Unipetrol, Unipetrol RPA, Unipetrol Doprava, Benzina and Unipetrol Services. The Lloyd's Register Quality Assurance certification agency conformed compliance with the given standards and issued new certificates with a 3-year validity.

From the perspective of the integrated management system of ČESKÁ RAFINÉRSKÁ, a.s., the supervisory audit executed by the LRQA certification agency in 2011 represented an important event. The objective of the audit was to evaluate suitability and efficiency of selected control and support processes and their added value for the

efficiency of the integrated management system, and to assess compliance of the processes of Česká Rafinérská with the standards of the quality management system, protection of the environment and occupational health and safety management system. In June 2009, an inspection certification audit, which included all three systems – EMS, HSMS and QMS – took place in PARAMO, a.s. The integrated certificate issued in 2009 (Lloyd's Register Quality Assurance) is valid until 2012.

## The “Responsible Business Activities in the area of Chemistry” program - Responsible Care

The Responsible Care program is a voluntary, world-widely accepted initiative of the chemical industry focused on supporting its sustainable development by responsive improvements in the safety of its operated devices, product transportation and protection of health and the environment. The program represents a long-term strategy coordinated by the International Council of Chemical Associations (ICCA) and by European Chemical Industry Council (CEFIC) in Europe. The contribution of the Responsible Care program to sustainable development was awarded by the UN Program for the Environment Award at the world summit in Johannesburg.

In 2005, the Responsible Care Global Charter was accepted as the continuation of the program at the international conference on chemical substances, sponsored by the UN.

The national version of the Responsible Care program is the Conducting Responsible Business in Chemistry program, officially announced in October 1994 by the Minister of Industry and Trade and by the president of the Association of Chemical Industry of the Czech Republic; since 2008, the program has complied with the conditions of the Responsible Care Global Charter. Details of the Responsible Care programs and the conditions for its fulfillment are stated on the information server of the Association of Chemical Industry of the Czech Republic <http://www.schp.cz>.

Some companies of the group – Unipetrol RPA, Česká Rafinérská, Paramo and Unipetrol – have been repeatedly awarded for successful fulfillment of the program conditions by the right to use the program's logo (The “Responsible Care” trademark, administered in Europe by the European Chemical Industry Council).

In 2011, upon verification of its compliance with the RC program conditions, Unipetrol Doprava received approval to use the Responsible Care logo for the first time.

### Certified/Verified management systems in the Unipetrol Group in 2011

Company	Verifier	Certification pursuant to standard	Certification dates	Certification horizon
Unipetrol RPA	LRQA	ISO 14001	2002, 2005, 2008, 2011	2014
Unipetrol RPA	LRQA	ISO 9001	1996, 1999, 2002, 2005, 2008, 2011	2014
Unipetrol RPA	LRQA	OHSAS 18001	2005, 2008, 2011	2014
Unipetrol RPA	SCHP ČR	Responsible Care	1996, 1998, 2000, 2002, 2004, 2008, 2011	2014
Paramo	LRQA	ISO 14001	2003, 2006, 2009	2012
Paramo	LRQA	ISO 9001	1996, 2000, 2003, 2006, 2009	2012
Paramo	LRQA	OHSAS 18001	2007, 2009	2012
Paramo	SCHP ČR	Responsible Care	2001, 2003, 2005, 2008	2012
Paramo	SCHP ČR	Sustainable Development Award	2008	
Unipetrol Doprava	LRQA	ISO 14001	2007, 2008, 2011	2014
Unipetrol Doprava	LRQA	ISO 9001	2005, 2008, 2011	2014
Unipetrol Doprava	LRQA	OHSAS 18001	2008, 2011	2014
Unipetrol Doprava	MOODY International	SQAS	2006, 2009	2012
Unipetrol Doprava	SCHP ČR	Responsible Care	2011	2014
Benzina	LRQA	ISO 14001	2008, 2011	2014
Benzina	LRQA	ISO 9001	1996, 1999, 2002, 2005, 2008, 2011	2014
Benzina	LRQA	OHSAS 18001	2008, 2011	2014
Česká Rafinérská	LRQA	ISO 14001	2001 / 2005, 2007, 2010	2013
Česká Rafinérská	LRQA	ISO 9001	2001 / 2004, 2007, 2010	2013
Česká Rafinérská	LRQA	OHSAS 18001	2007, 2010	2013
Česká Rafinérská	SCHP ČR	Responsible Care	2000 / 2002, 2004, 2008	2012
Unipetrol	LRQA	ISO 14001	2008, 2011	2014
Unipetrol	LRQA	ISO 9001	2008, 2011	2014
Unipetrol	LRQA	OHSAS 18001	2008, 2011	2014
Unipetrol	SCHP ČR	Responsible Care	2000, 2003, 2005, 2007, 2011	2014
Unipetrol Services	LRQA	ISO 14001	2008, 2011	2014
Unipetrol Services	LRQA	ISO 9001	2008, 2011	2014
Unipetrol Services	LRQA	OHSAS 18001	2008, 2011	2014

## Compliance with legal regulations related to the protection of the environment

### Integrated pollution prevention

Obligations of selected industrial companies in the area of the integrated pollution prevention (IPPC) are specified in Act No. 76/2002, as amended. This act applies to, among others, all production companies of the chemical and refinery industry.

Integrated permits for the refineries in Litvínova and Kralupy were issued for the refineries as a whole without any further divisions into individual operations. Changes of the integrated permits were adopted in relation to the new investment projects, which, based on their extent, required a change of such integrated permits.

The integrated permit for the refinery in Litvínov was issued by the Regional Authorities of the Ústí nad Labem Region on December 15<sup>th</sup>, 2003. Change No. 1 of the integrated permit in relation to the given investment projects was issued based on the decision of the Regional Authorities of the Ústí nad Labem Region from July 20<sup>th</sup>, 2006. The subject of this change was the filling process, storage and usage of LCO (light cycle oil from the refinery in Kralupy) and the filling process, storage and blending of MERO (bio-fuel). Change No. 2 of the integrated permit in relation to the given investment projects was issued based on the decision of the Regional Authorities of the Ústí nad Labem Region from October 16<sup>th</sup>, 2006. The subject of this change was the revamp of the fission unit of the new hydrocrack and construction of a re-contacting system on the visbreaking unit. On June 12<sup>th</sup>, 2007, Change No. 3 of the integrated permit in relation to the given investment projects was issued. The subject of this change was the replacement of the original burners for low-emission ones at the furnaces of the new refinery, installation of the combustion air preheating system and replacement of the original burners for low-emission ones at the hydrogenation unit of the gaseous oil, intensification of the rich gases desulfuring unit and MEA regeneration. On May 5<sup>th</sup>, 2008, Change No. 4 of the integrated permit in relation to the given investment project was issued. The subject of this change was related to the oxygen economy for enriching the combustion air for the Claus units. On June 27<sup>th</sup>, 2008, Change No. 5 of the integrated permit in relation to the given investment project related to the construction of the filling station for light products was issued. On June 8<sup>th</sup>, 2009, Change No. 6 of the integrated permit in relation to the given project related to the change of the used fuel in the furnaces of the catalytic reforming system was issued. On March 28<sup>th</sup>, 2011, Change No. 7 of the integrated permit in relation to the given investment projects was issued. The subject of the projects was a modification of the flaring system of the refinery block and a repair of the Claus unit's chimney brickwork. At the same time, conditions for discharging industrial waste water into the sewer system on the premises were specified. Towards the end of 2011, applications were being prepared for a change of the integrated permit in relation to the cancellation of the oil economy for the combustion of liquid fuels and in relation to the repairs of the sulfur production devices. The corresponding changes of the integrated permit (No. 8 and 9) were issued on January 4<sup>th</sup>, 2012 and February 28<sup>th</sup>, 2012.

The integrated permit for the refinery in Kralupy was issued by the Regional Authorities of the Central Bohemian Region on February 9<sup>th</sup>, 2004. Mainly because of procedural errors by the appropriate authorities when issuing the integrated permit, the decision was later nullified and the Regional Authorities of the Central Bohemian Region issued a new decision on the integrated permit on March 13<sup>th</sup>, 2008. This new permit applies to all devices of the refinery in Kralupy. On March 2<sup>nd</sup>, 2011, a change of the integrated permit was issued, justified by the installation of continuous analyzers at the output from the Claus unit and by an adjustment of the completion deadline of the water treatment plant revamp.

All technologies operated by PARAMO, a.s. have valid integrated permits. At HS Pardubice, integrated permits have been acquired for the Power Engineering unit, Asphalts unit, Fuels unit and Oils unit issued by the Pardubice Regional Authorities. HS Kolin has acquired one integrated permit issued by the Regional Authorities of the Central Bohemian . All of the above stated permits are continuously upgraded based on given planned investments and legislative changes.

All production units of UNIPETROL RPA, s.r.o. have valid integrated permits issued by the Regional Authorities of the Ústí nad Labem Region. These permits are continuously upgraded based on the implementation of investment projects, changes of technological devices, used substances, incurred waste substances or changes of legal regulations. During 2011, a total of 13 changes of the integrated permits for individual company devices were issued.

The changes were related, for example, to the determination of the manner of emission measurements, reduction of the SO<sub>2</sub> emission ceiling for the energy block of the ethylene unit, amendments of the conditions for preventing water pollution (monitoring of the quality of waste, transferred and consumed water, technological adjustments related to discharging the waste water from the DEMI ethylene unit station, construction adjustments at the sand traps leading to the reduction of the volume of the water discharged to the Bílý Creek), determination of a new manner for water management (water transfer using reverse flow), approval of operation tests and determination of the conditions for their execution, extension of the waste list, etc.

Summary of the issued integrated permits for operation as of December 31<sup>st</sup>, 2011

Production unit	Integrated permit (issued when and by whom)
<b>Unipetrol RPA</b>	
Production of polypropylene and polyethylene	Regional Office of the Ústí nad Labem Region; issued on December 16 <sup>th</sup> , 2003 for an indefinite period of time, 10 changes
Ethylene unit, including the naphthalene concentrate production facility	Regional Office of the Ústí nad Labem Region; issued on February 21 <sup>st</sup> , 2005 for an indefinite period of time, 6 changes
Urea production	Regional Offices of the Ústí nad Labem Region; issued on September 22 <sup>nd</sup> , 2005, valid until 2017, 4 changes
Ammonia production	Regional Office of the Ústí nad Labem Region; issued on June 12 <sup>th</sup> , 2006 for an indefinite period of time, 3 changes
Mazut gassing production facility	Regional Office of the Ústí nad Labem Region; issued on July 12 <sup>th</sup> , 2006 for an indefinite period of time, 5 changes
Production of oxo-alcohols	Regional Office of the Ústí nad Labem Region; issued on July 16 <sup>th</sup> , 2007, valid until March 31 <sup>st</sup> , 2010, 3 changes Nullified as a result of the notification on the termination of the device operation from September 2 <sup>nd</sup> , 2011
T200 and T700 production facility and waste water production facility and waste	Regional Office of the Ústí nad Labem Region; issued on October 11 <sup>th</sup> , 2007 for an indefinite period of time, 11 changes
Production of dicyclopentadiene and the non-hydrogenated C9 fraction	Regional Office of the Ústí nad Labem Region; issued on February 23 <sup>rd</sup> , 2009 for an indefinite period of time, without changes
<b>Česká Rafinářská</b>	
<b>Litvínov refinery</b>	
ČESKÁ RAFINĚRSKÁ, a.s., Litvínov refinery	Regional Office of the Ústí nad Labem Region; issued on December 15 <sup>th</sup> , 2003 for an indefinite period of time, 9 changes
<b>Kralupy nad Vltavou refinery</b>	
ČESKÁ RAFINĚRSKÁ, a.s., Litvínov refinery	Regional Office of the Central Bohemian Region; issued on March 13 <sup>th</sup> , 2008 for an indefinite period of time, 1 change
<b>Paramo</b>	
Power engineering, economic center in Pardubice	Regional Office of the Pardubice Region; issued on February 2 <sup>nd</sup> , 2004 for a definite period of time until the end of 2013 for boiler K2, 3 changes
Asphalts unit, economic center in Pardubice	Regional Office of the Pardubice Region; issued on October 2 <sup>nd</sup> , 2004 for an indefinite period of time, 5 changes
Fuel operation, economic center in Pardubice	Regional Office of the Pardubice Region; issued on December 7 <sup>th</sup> , 2004 for an indefinite period of time, 4 changes
Economic center in Kolín	Regional Office of the Central Bohemian Region; issued on May 31 <sup>st</sup> , 2005 for an indefinite period of time, 6 changes
Oils unit, economic center in Pardubice	Regional Office of the Pardubice Region; issued on January 23 <sup>rd</sup> , 2006 for an indefinite period of time, 4 changes

*Integrated pollution register*

The integrated pollution register (IRZ) is operated in the Czech Republic based on Act No. 25/2008 Coll., as amended, and in compliance with directive of the European Parliament and European Council No. 166/2006, which establishes the European Pollutant Release and Transfer Register (E-PRTR).

The pollution records (IRZ a E-PRTR) register emission data on 93 specified agents, released to the air, water and soil, on their transfers in waste and waste water and on transfers of hazardous and other waste for individual companies and industry sectors. The data for IRZ and E-PRTR are submitted by the companies jointly for the previous year via the Integrated System for the Fulfillment of the Notification Obligations (ISPOP) by March 31<sup>st</sup> and consequently published on the IRZ server by September 30<sup>th</sup>. Pursuant to the requirements of the applicable legislature, the IRZ integrated pollution register includes substances, emissions of which reach or exceed the quantity specified as a threshold value.

## Protection of the air, discharging waste water and waste management

Activities of all companies of the group comply, over a long period, with the requirements of the laws related to the protection of the environment. The air pollution sources are operated in compliance with the valid operational regulations. Authorized emission measurements are secured by the appropriate legislative deadlines. All facilities have approved water management plans. There is regular monitoring of the waste water quality in place. The waste water pollution emission limits are complied with. All facilities also have approved waste management plans and their waste is monitored and registered pursuant to the valid legislature.

Compliance with the appropriate legal regulations is monitored by the company managements and by the group headquarters and independently verified by the appropriate administration authorities, certification authorities and, in the case of the companies that participate in the "Responsible Care" program, by the Association of Chemical Industry of the Czech Republic. Shall there be any deviations from the requirements of the legal standards, corrective measures are immediately adopted or, if appropriate, penalties are issued by the administration authorities

### **Discharging waste water**

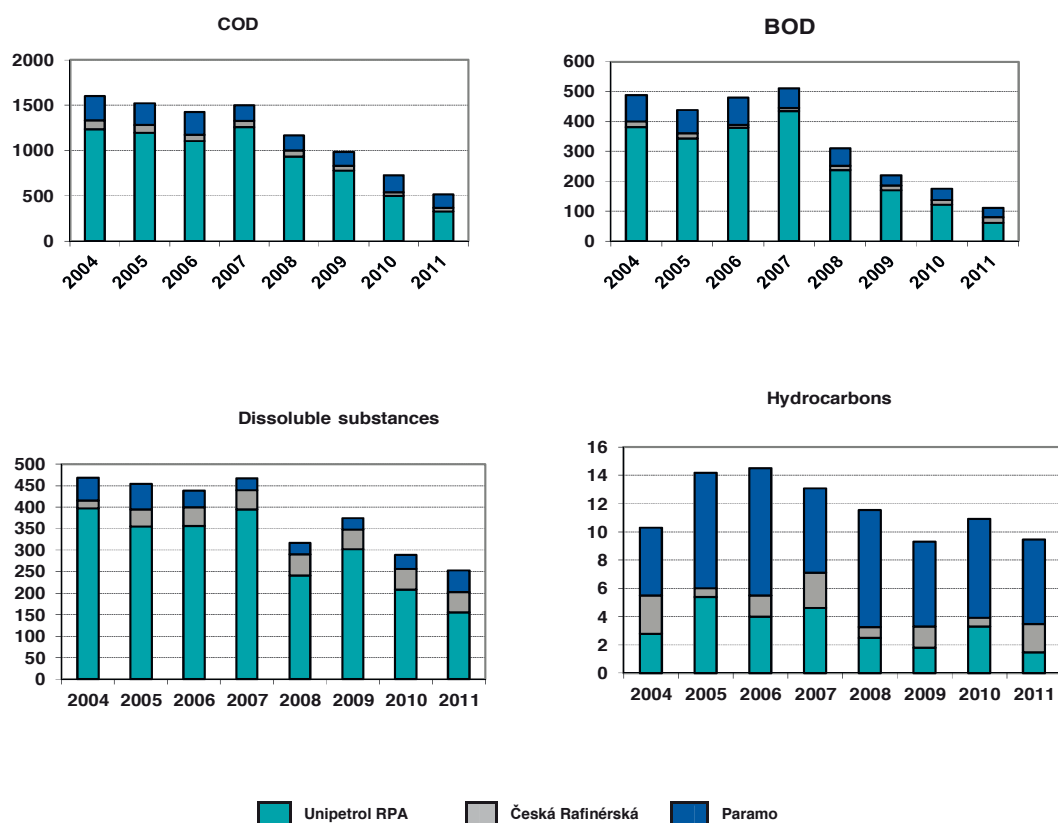
Pollutant emissions into the environment during the last five years have been stabilized at a level achieved by massive environmental investments, implemented during the previous decade.

The volume of pollutants discharged in waste water has been continuously decreasing. The decrease has been caused by several investment and non-investment measures, for example by an extensive renovation of the biological water treatment plant of Unipetrol RPA during 2007-2009, by reconnecting municipal waste water to the newly built water treatment plant in 2011, by segregating industrial water from the unified sewerage system into the industrial sewerage system and by several other measures. The technological shutdown in the autumn of 2011 had also a significant impact on the reduction of the emissions into water.

**Pollution discharged in waste water within the group (tons/year)**

Year	Parameter	2004	2005	2006	2007	2008	2009	2010	2011
<b>Unipetrol RPA</b>	COD	1,239	1,197	1,107	1,261	932	780	500	329
	BOD	381	344	379	435	237	171	122	62
	Dissoluble substances	398	355	357	395	241	302	208	155
<b>Česká rafinérská <sup>1)</sup></b>	Hydrocarbons	3	5	4	5	3	2	3	1
	COD	92	83	69	66	71	49	37	37
	BOD	19	16	9	11	15	14	15	18
<b>Paramo</b>	Dissoluble substances	17	40	43	45	49	46	49	48
	Hydrocarbons	3	1	2	3	1	2	1	2
	COD	269	245	248	171	163	154	192	153
<b>Unipetrol Group</b>	BOD	89	79	92	65	59	35	38	32
	Dissoluble substances	54	59	38	27	27	26	32	50
	Hydrocarbons	5	8	9	6	8	6	7	6
<b>Unipetrol Group</b>	COD	<b>1,600</b>	<b>1,525</b>	<b>1,424</b>	<b>1,498</b>	<b>1,166</b>	<b>983</b>	<b>729</b>	<b>519</b>
	BOD	<b>489</b>	<b>439</b>	<b>480</b>	<b>511</b>	<b>311</b>	<b>220</b>	<b>175</b>	<b>112</b>
	Dissoluble substances	<b>469</b>	<b>454</b>	<b>438</b>	<b>467</b>	<b>317</b>	<b>374</b>	<b>289</b>	<b>253</b>
	Hydrocarbons	<b>10</b>	<b>14</b>	<b>15</b>	<b>13</b>	<b>12</b>	<b>10</b>	<b>11</b>	<b>9</b>

<sup>1)</sup> Only in Kralupy

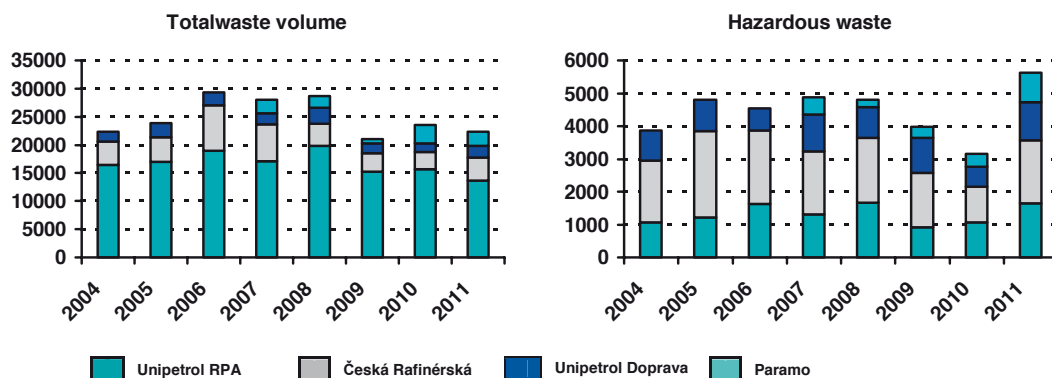

**Waste management**

From the long-term perspective, the Unipetrol Group has achieved a vigorous reduction of the volume of overall as well as hazardous waste. The waste volume during the period of 2004 - 2010 was, more or less, stable. Some smaller fluctuations were caused by stopping works or extensive investment construction. In 2011, the group has recorded a partial increase of the waste production in relation to the total shutdown of the devices in UNIPETROL RPA and Česká Rafinérská.

## Waste production within the group (tons/year)

Year	Parameter	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	Total	16,411	17,061	18,963	17,065	19,818	15,261	15,693	13,633
	Hazardous waste share	1,059	1,215	1,620	1,309	1,661	914	1,067	1,639
Česká rafinérská <sup>1)</sup>	Total	4,192	4,301	8,051	6,599	3,911	3,323	3,103	4,113
	Hazardous waste share	1,895	2,628	2,253	1,932	1,985	1,663	1,078	1,936
Paramo	Total	1,718	2,507	2,310	1,983	2,821	1,723	1,449	2,048
	Hazardous waste share	920	963	665	1,115	939	1,060	629	1,151
Unipetrol doprava	Total		2,419	2,094	2,419	2,094	722	3,352	2,539
	Hazardous waste share		527	214	527	214	344	393	906
Unipetrol Group	Total	22,321	26,288	31,418	28,066	28,644	21,029	23,597	22,333
	Hazardous waste share	3,874	5,333	4,752	4,883	4,799	3,981	3,167	5,632

<sup>1)</sup> Including investment activities



## Air protection

Compared to 2006, Unipetrol RPA and the Záluží part of Česká Rafinérská recorded an increase of the overall emissions of the sulfur dioxide in 2007. This increase was a result of the backup combustion of residual gases containing hydrogen sulfide from the mazut gassing production facility of Unipetrol RPA and of the burning of the excesses of the refinery residual gases of the Záluží refinery, which could not have been processed in the units for desulphurizing rich gases. By implementing the investment project for the "Adjustments of the unit for desulphurizing rich gases", which led to an increased capacity of the desulphurizing unit, and the project for "Building the Visbreaking re-contacting unit" (allows for desulphurizing low-pressure gases from this unit), a situation was achieved where all gases are processed in the appropriate technological units without their combustion. There was no combustion of residual gases implemented in 2008, which would result from insufficient capacity for their processing.

The increase of the emissions of sulfur dioxide as well as nitrogen oxides in the Litvínov refinery in 2009 was caused by a defect of the boiler at the Claus III unit, resulting in the need to replace the boiler piping. During the repair period, a hydrogen sulfide gas containing ammonia, emissions of which are recalculated to nitrogen oxides, was subjected to combustion on a field burner. In 2010, the operation was stabilized and the volume of the emissions dropped. The increased emissions of SO<sub>2</sub> in 2011 are the result of the combustion of a part of the hydrogen sulfide gases during the repair of the devices at the sulfur production facility in the Litvínov refinery.

Since 2007, Unipetrol RPA has been recording an overall decrease of the volume of the pollutants released into the air. The decrease has been caused by the gradual shutdown of the older T200 heating plant (completely shut down in 2011), and by optimization of the operation of the newer T700 heating plant and other air pollution sources. The partial increase of the emission of solid particles in 2010 was mainly caused by a lower quality of the filters used prior to the production shutdown of the T200 heating plant. The increase of the SO<sub>2</sub> emissions was caused by a high content of sulfur in the raw material – brown coal.

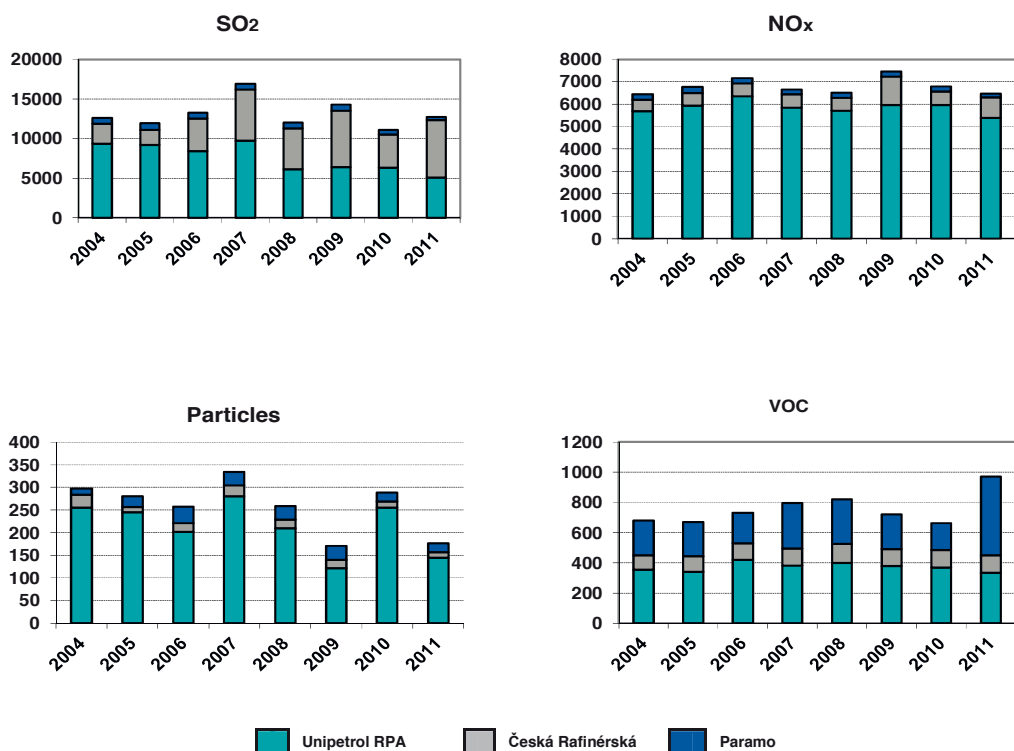
Priority combustion of natural gas in the boiler rooms of HS Pardubice and HS Kolín led, when compared annually with years 2009 and 2010, to a reduction of the emissions of sulfur dioxide and nitrogen oxides. The reduction of the overall emissions from combustion processes was achieved despite the almost 100% increase of oil processing in HS Kolín. The increase of the VOC emissions (fugitive emissions of methyl ketone and toluene) is the result of the stated oil processing increase.



**Pollution emitted to the air within the group (tons/year)**

Year	Parameter	2004	2005	2006	2007	2008	2009	2010	2011
<b>Unipetrol RPA</b>	SO <sub>2</sub>	9,334	9,197	8,409	9,691	6,143	6,397	6,290	5,081
	NO <sub>x</sub>	5,678	5,945	6,346	5,839	5,695	5,959	5,954	5,388
	Particles	255	245	202	281	210	122	255	145
	VOC	356	341	420	381	400	379	367	334
<b>Česká rafinérská</b>	SO <sub>2</sub>	2,530	1,910	4,107	6,469	5,166	7,121	4,234	7,220
	NO <sub>x</sub>	518	545	593	604	567	1259	612	906
	Particles	29	12	19	24	19	18	14	12
	VOC	94	103	110	113	127	111	117	118
<b>Paramo</b>	SO <sub>2</sub>	717	835	704	749	721	742	546	389
	NO <sub>x</sub>	244	276	213	208	212	239	219	175
	Particles	14	24	37	29	30	31	20	19
	VOC <sup>1)</sup>	230	225	200	304	293	231	178	520
<b>Unipetrol Group</b>	SO <sub>2</sub>	<b>12,581</b>	<b>11,942</b>	<b>13,220</b>	<b>16,909</b>	<b>12,030</b>	<b>14,260</b>	<b>11,070</b>	<b>12,690</b>
	NO <sub>x</sub>	<b>6,440</b>	<b>6,766</b>	<b>7,152</b>	<b>6,651</b>	<b>6,474</b>	<b>7,457</b>	<b>6,785</b>	<b>6,469</b>
	Particles	<b>298</b>	<b>281</b>	<b>258</b>	<b>334</b>	<b>259</b>	<b>171</b>	<b>289</b>	<b>176</b>
	VOC	<b>680</b>	<b>669</b>	<b>730</b>	<b>798</b>	<b>820</b>	<b>721</b>	<b>662</b>	<b>972</b>

<sup>1)</sup> 90% are fugitive emissions, which are recorded only based on the purchases of solvents during the given calendar year



## Evaluating the impacts on the environment

As a part of the preparation of the waste water plant revamp project in the Kralupy refinery, ČESKÁ RAFINÉRSKÁ, a.s. was invited by the Regional Authorities of the Central Bohemian Region to prepare and submit documentation for investigation proceedings. Based on the prepared documentation, the Regional Authorities of the Central Bohemian Region concluded that the intention shall be assessed in accordance with Act No.100/2001 Coll., on Environmental Impact Assessment.

In 2011, in relation to the plan to modernize polyethylene production, activities related to the preparation of documentation on the given environmental impact assessment (EIA) for the construction of a new PE 3 production unit, which shall replace the PE 1 production facility in the future, commenced.

No environmental impact assessment (EIA) procedure took place in the remaining companies of the group in 2011.

## Sanctions for breaching the requirements of environmental laws

The low number of partial breaches of the environmental laws, occurred as a result of non-standard operational situations during the last five years, i.e. 2007-2011, demonstrates our effort to comply with the environmental legal regulations. During the above stated time period, companies of the group were subjected to 12 penalties and only four of them, considered to be more serious breaches of water protection obligations, exceeded 100,000 CZK.

### Summary of penalties for breaching obligations in the area of the protection of the environment for 2007-2011

Company	Year	Penalty cause	Penalty amount (in thousands CZK)	Note
Unipetrol RPA	2007	Unauthorized discharge of waste water during the waste water treatment plant reconstruction	1,000	Paid, no appeal
Unipetrol RPA	2010	Breaching the obligations for handling harmful substances (PyBi leak into the river)	1,750	Paid, no appeal
Unipetrol RPA	2011	Exceeding the "m" limit of the AOX factor in discharged waste water for 2010	120	Paid, no appeal
Benzina	2007	Unauthorized discharge of waste water from the separator at the Libhošť gas station	15	Paid, no appeal
Česká Rafinérská	2009	Not complying with the law for waste evidence	30	Paid, no appeal
Česká Rafinérská	2009	Breaching stipulations of the Water Act	323.9	Appeal to the Regional Authorities, the penalty was confirmed by the appeal body, paid
Paramo	2008	Not complying with the IP conditions (technical condition of the reservoir at the lubrication production unit)	41	Appeal to the Ministry of the Environment, not successful
Paramo	2008	Not complying with the law for waste evidence	31	
Paramo	2010	Incorrect labeling of Mogul Traktol Utto	30	Paid
Paramo	2010	Exceeding the noise level on the edge of a residential area	12	Paid
Paramo	2011	Incorrect labeling of a retail package	31	Paid
Paramo	2011	Breaching stipulations of the Water Act	6	Paid

## Reducing environmental and operation risks and preventing major accidents

### Preventing major accidents

For a long time, the companies in the group have devoted a great care to the prevention of major accidents. The basic condition for preventing major accidents is a reliable and error-free operation of production facilities, which are projected, operated, inspected and maintained in conditions that comply with the legislature of the Czech Republic and their own internal regulations. Some of the regulations also include requirements that go beyond the frame of the legislature and are based on the best experience of the companies in the group.

Production facilities are equipped with management systems that signal deviances from the standard operational parameters. Some dangerous operation units are equipped with automatic shutdown systems that are activated when given specified operational parameters are exceeded. Based on the handled hazardous substances, production facilities are equipped with modern detection systems (detection of fire, smoke or leaked hazardous substances) with outputs connected to the control rooms and operation centers of the firefighting unit of the given company. Stable and semi-stable fire extinguishers and fire monitors are installed in the given production facilities.

Companies of the group are subject to regular internal audits of safety and accident prevention. Moreover, regular external audits and inspections by professional supervision bodies are also executed. These bodies include ČIŽP, OIP, HZS, professional organizations in the Czech Republic, insurance brokers, insurance institutions and foreign security agencies. Recommendations and conclusions of these audits are incorporated into the appropriate implementation plans.

An important part of the prevention of serious accidents is formed by regular training of the employees. Functionality of the major accidents' prevention system is verified throughout the year by practicing emergency and crisis situation drills in cooperation with the appropriate internal and external intervention units (at individual production facilities + emergency drills on the company premises conducted in cooperation with the companies that administer the given industrial facilities or that conduct their business in their immediate proximity).

A part of the risk management of serious accidents is formed by an appropriate liability insurance concluded pursuant to Act No. 59/2006 Coll.

The safety level of the companies in the group is influenced by important new investments into production facilities, which address possible operational risks already in during the project preparation stage, utilizing generally reputable methods for major accident risk analysis. All new operation facilities are always equipped with the most modern safety systems, known at the moment of the given implementation, which comply with the appropriate legal regulations of the Czech Republic and the European Union.

All production companies in the group have their own firefighting units, equipment and training of which is of a top-class level, allowing for executing highly specialized interventions in the case of accidents involving leaks of harmful substances.

Most production facilities of the companies in the group, assigned to the "B" group, are subject to the stipulations of Act No. 59/2006 Coll., on the Prevention of Major Accidents Caused by Handling Selected Hazardous Chemical Substances/Preparations.

In 2011, none of the companies in the group recorded any accident that would be subject to notification in accordance with Act No. 59/2006 Coll., on the Prevention of Major Accidents.

One level two emergency staff meeting was convened in ČESKÁ RAFINÉRSKÁ, a.s. upon a small leak of hydrocarbons from the waste water treatment plant in the Kralupy refinery to the Vltava River.

A total of 41 emergency training sessions were conducted at ČESKÁ RAFINÉRSKÁ, a.s. In one case, a level two accident, including an emergency shutdown of the PSP unit in Litvínov, was simulated. The subject of the training was to practice a procedure for the case of a leak of hydrogen sulfide gas from a cracked welded joint on a pipeline. Results of these training sessions assisted in the process of improving knowledge of all participants, locating deficiencies and correcting them in the case of a real accident.

**Summary of the assignments of the companies to individual groups in accordance with Act No. 59/2006 Coll., as amended, and the status of the Safety Report issued as of December 31<sup>st</sup>, 2011**

Company	Groups	Safety Report (SR)
UNIPETROL RPA, s.r.o.	B	1 <sup>st</sup> SR update approved on March 1 <sup>st</sup> , 2005 (pursuant to Act No. 353/1999 Coll.) / Regional Authorities of the Ústí nad Labem Region  2 <sup>nd</sup> SR update approved on January 18 <sup>th</sup> , 2008 (pursuant to Act No. 59/2006 Coll.) approved / Regional Authorities of the Ústí nad Labem Region
UNIPETROL DOPRAVA, s.r.o. – Operational area East, Pardubice siding	B	1 <sup>st</sup> SR update approved on April 2 <sup>nd</sup> , 2008 / Regional Authorities of the Pardubice Region, under registration number 36470-16/2007/OŽPZ/BT
UNIPETROL DOPRAVA, s.r.o. - Operational area East, Semtín siding	B	1 <sup>st</sup> SR update approved on April 2 <sup>nd</sup> , 2008 / Regional Authorities of the Pardubice Region, under registration number 36472-18/2007/OŽPZ/BT
UNIPETROL DOPRAVA, s.r.o. - Operational area West, Litvínov siding	B	SR update approved on June 23 <sup>rd</sup> , 2008 / Regional Authorities of the Ústí nad Labem Region, under registration number 2053/ZPZ/07/H-20.2  SR update submitted on September 15 <sup>th</sup> , 2011 (2 <sup>nd</sup> issue) for approval to the Regional Authorities of the Ústí nad Labem Region (organizational changes + changes of the trap of hazardous substances), approval process underway
UNIPETROL DOPRAVA, s.r.o. - Operational area West, Kralupy siding	B	SR update approved on November 11 <sup>th</sup> , 2008 / Regional Authorities of the Central Bohemian Region, under registration number 120636/2007/KUSK OŽP Bo  SR update submitted on December 27 <sup>th</sup> , 2011 (2 <sup>nd</sup> issue) for approval to the Regional Authorities of the Central Bohemian Region (organizational changes + changes of the trap of hazardous substances), approval process underway
UNIPETROL DOPRAVA, s.r.o. - Operational area West, Neratovice siding	B	SR update approved on December 5 <sup>th</sup> , 2008 / Regional Authorities of the Central Bohemian Region, under registration number 119423/2007/KUSK OŽP Oh
ČESKÁ RAFINÉRSKÁ, a.s. Litvínov refinery	B	Approved on February 16 <sup>th</sup> , 2003 / Regional Authorities of the Ústí nad Labem Region  Update approved by the Regional Authorities of the Ústí nad Labem Region on June 3 <sup>rd</sup> , 2009 Registration number 23/09/ZPZ/H-02-2a/state
Kralupy refinery	B	Approved by the District Office in Mělník on October 8 <sup>th</sup> , 2002 Update approved by the Regional Authorities of the Central Bohemian Region on October 10 <sup>th</sup> , 2008, registration number 83689/2007KUSK OŽP
PARAMO, a.s., Pardubice economic center	B	SR approved on August 2 <sup>nd</sup> , 2004 - Regional Authorities of the Pardubice Region  Updated SR approved on June 16 <sup>th</sup> , 2005 Updated SR approved on October 10 <sup>th</sup> , 2008 Updated SR approved on October 16 <sup>th</sup> , 2009 Evaluation of the operator's SR processed – approved on March 8 <sup>th</sup> , 2012
PARAMO, a.s., Kolín economic center	-	Not subject to Act No. 59/2006 Coll.
BENZINA, s.r.o.	-	Not subject to Act No. 59/2006 Coll. Protocols on non-assignment of the gas stations to the appropriate groups pursuant to the above stated Act were updated and submitted to the appropriate Regional Authorities.

## Transportation information and accident system TRINS

The transportation information and accident system (TRINS) represents an assistant system for accidents related to the transportation of hazardous substances. TRINS was established by the Association of Chemical Industry of the Czech Republic as a part of the “Responsible Care” program in 1996 based on an agreement concluded between the above stated association and the General Headquarters of the Firefighting Rescue Unit of the Czech Republic. As one of the support systems, it was included into the Integrated Rescue System of the Czech Republic. A system analogical to TRINS on the international level is, for example, the British CHEMSAFE system or the German TUIS system, which was used as a model when creating TRINS. Similar systems have been also built in Slovakia (DINS), Hungary (VERIK) and in several other EU countries where they have been in place for a long time.

The TRINS centers, in cooperation with the Firefighting Rescue Unit of the Czech Republic, provide necessary

urgent consultations related to the data on given chemical substances and products, their safe transportation and storage, practical experience with handling hazardous substances and liquidation of extraordinary events related to their transportation. The TRINS centers also provide practical assistance with liquidating such extraordinary events and rectifying consequent environmental damages.

There are currently 39 regional TRINS centers in the Czech Republic. They are operated by 26 companies from the area of chemical industry. The companies of the Unipetrol Groups are one of the founding members of TRINS. Moreover, Unipetrol RPA also works as the national system coordination center.

**Summary of the companies from the Unipetrol Group participating in TRINS**

Company	Participation in the “TRINS” accident system
UNIPETROL RPA, s.r.o.	National center, regional center
ČESKÁ RAFINĚRSKÁ, a.s	
- Litvínov refinery - Kralupy refinery	Regional center Regional center
PARAMO, a.s.	Regional center (HS Kolín, HS Pardubice)
PETROTRANS, s.r.o.	Regional center
UNIPETROL SERVICES, s.r.o.	<b>Representation of SCHP Czech Republic – securing activities of the entire system, recording and supporting the National center at UNIPETROL RPA, s.r.o.</b>

**Major accidents within the Unipetrol Group in 2011**

In 2011, the companies of the UNIPETROL Group recorded no accident classified as a serious accident pursuant to Act No. 59/2006 Coll. Small operation accidents, which occurred during the year, were handled by the companies themselves or, when necessary, by the company firefighting rescue units. All of the accidents were adequately responded to and appropriate correction and preventive measures adopted. The effects of the small operation accidents did not exceed the area of the companies in the group.

## Open approach to environmental solutions

### Roles of the employees in HSE area

The Unipetrol Group considers its employees to be the key carriers of the activities related to the protection of the environment, occupational health and safety and fire protection. That is why individual companies of the group have introduced an effective training system for all their employees. Training and education of the employees forms a part of the already established management systems and subject to regular inspections, evaluations and amendments in accordance with the ISO 9001, ISO 14001 and OHSAS 18001 standards.

All employees are actively and permanently engaged in the creation and protection of the environment. They regularly attend recondition training sessions, where they are acquainted with given policies in the areas of the protection of the environment, occupational health and safety, fire protection, environmental aspects of their activities and objectives and programs defined for their respective worksites.

Regular training does not apply only to the given company employees but also to employees of external companies who work in the given production facilities. Obligations related to the protection of the environment, occupational health and safety and fire protection form a part of the contracts concluded with individual contractors.

### Communicating with the public

Information openness is one of the principles of the “Responsible Business Policy in Chemistry and the Integrated Management System of Occupational Health and Safety, Protection of the Environment and Quality” of the Unipetrol Group, forming a basic conception document of the group.

Detailed information about the conditions and development of the impacts of the group activities on the environment is regularly published in the “Joint Report of the Unipetrol Group on Occupational Health and Safety and the Protection of the Environment” (until 2006 called “Joint Environmental Report”) and on the websites of the companies of the group.

The companies publicly discuss their reports on fulfilling the “Responsible Care” program with representatives of the unions and local and regional governments. The website of the Unipetrol Group includes a list of their activities in the area of the protection of the environment and occupational health and safety.

In relation to towns and communities, the companies of the Unipetrol Group exercise principles of social responsibility (CSR). A part of their cooperation with the public is formed by informing about the impact of the companies on the environment in the company surroundings. The companies do so by sending representatives of the Unipetrol Group management to public meetings of the local authorities. “Day of Open Doors” are organized for the public. The companies regularly organize meetings with community mayors in the region, during which the participants are informed about all applicable activities, including activities in the area of the protection of the environment. Upon occurrence of any non-standard operational situation, the mayors of the surrounding communities are preventively and immediately informed. Shall immediate communication with the public as well as the company employees be required, “green lines” are used. Employees are also informed about all current information via Internet communication tools (radio, printed material, intranet).

Yet another example of active information openness in the area of the protection of the environment is the activity of the Environmental Center in Most, which has been in operation since 2000 with the support of Unipetrol RPA and Česká Rafinérská. The center significantly participates in mutual dialogue in the area of the protection of the environment between industrial companies and wide public. It also secures cross-the-border communication with adjoining Saxony. In 2007, the Environmental Center in Kralupy nad Vltavou began its activities. The center has the same objective for the Kralupy region.

In cooperation with the Environmental Center in Most, preparation of the project for preparing the “Chemistry and the Environment” educational program, focused on the education of elementary school and high school students, was completed. The objective of the project was especially popularization of the protection of the environment issues in relation the chemical production, presentation of positives and negatives related to chemical production and presentation of the Unipetrol RPA activities in the area of the protection of the environment. The project encountered a very positive reaction from the schools. That is why, based on their request, the project continued in 2008. In 2011, in cooperation with the Environmental Center in Most, an interactive teaching program called the “Journey in the Search of the Crude Oil Secret” was prepared for the pupils of elementary schools and high schools. Česká Rafinérská, together with the Institute of Chemical Technology and other partners, operates the Petroleum.cz information portal, which includes a wide range of information about crude oil and crude oil products and their impact on the environment. The information is designed for a wide public.

**Summary of the periodicals of the companies of the Unipetrol Group, which regularly inform about activities in the area of the environment**

Company	Publication	Contact person
Unipetrol	UNI, newspaper of the Unipetrol Group employees	Martin Pavlíček MA, tel. +420 225 001 490
Unipetrol	Company website	<a href="http://www.unipetrol.cz">http://www.unipetrol.cz</a>
Unipetrol RPA	Company website	<a href="http://www.unipetrolrpa.cz">http://www.unipetrolrpa.cz</a>
Unipetrol RPA	Information monthly bulletin on occupational safety and fire protection	Ing. František Hrobský, tel. +420 476 164 883
Unipetrol Doprava	Company website	<a href="http://www.unipetroloprava.cz">http://www.unipetroloprava.cz</a>
Unipetrol Doprava	Information monthly bulletin on occupational safety and fire protection	Ing. František Hrobský, tel. +420 476 164 883
Česká Rafinérská	RaCeK – newspaper of Česká Rafinérská	Ing. Aleš Soukup, CSc., tel. +420 315 718 579
Česká Rafinérská	Impuls, bulletin on occupational health and safety, fire protection, quality and the environment	Ing. Michaela Freyová, MBA tel. +420 476 164 041
Česká Rafinérská	Company website	<a href="http://www.ceskarafinerska.cz">http://www.ceskarafinerska.cz</a>
Paramo	Company website	<a href="http://www.paramo.cz">http://www.paramo.cz</a>



## Reducing impacts of old environmental burdens

### Program for remediation old environmental burdens

Based on the decision of the government of the Czech Republic in relation to privatization, the companies of the Unipetrol Group concluded a contract on solving environmental obligations arisen prior to privatization (Environmental Contract) with the Ministry of Finances of the Czech Republic:

- 1) Environmental Contract No. 14/94, as amended by Amendment 3 from January 25<sup>th</sup>, 2005, UNIPETROL, a. s.
- 2) Environmental Contract No. 32/94, as amended by Amendment 1 from July 4<sup>th</sup>, 2001, UNIPETROL, a. s.
- 3) Environmental Contract No. 39/94, as amended by Amendment 2 from July 4<sup>th</sup>, 2001, PARAMO, a. s.
- 4) Environmental Contract No. 58/94, as amended by Amendment 3 from September 26<sup>th</sup>, 2008, PARAMO, a. s.
- 5) Environmental Contract No. 184/97, as amended by Amendment 7 from January 18<sup>th</sup>, 2007, BENZINA, s.r.o.

### Summary of old environmental burdens in the Unipetrol Group

In 2011, no changes in the extent of old environmental burdens in comparison with the previous period were recorded. A summary of old environmental burdens of the Unipetrol Group is stated below.

*UNIPETROL, Litvínov – industrial facility and other locations*

#### **Litvínov – Kralupy nad Vltavou ethylbenzene pipeline, location Miletice u Velvar**

- Pollution of the underground water and soil by ethylbenzene
- Sanitation works were completed and surface water is being monitored

#### **Litvínov industrial facility and surrounding dump sites**

- Dump sites of liquid sludge in Růžodol
  - Pollution by tar residues and waste from crude oil refining
  - Waste from all dump sites were removed
- Fly ahs dump sites K1-K4
  - Sanitation works at fly ahs dump sites K1 and K2 were completed
  - Documentation for issuing a zoning decision for the construction and operation of an hydraulic protection system at dump site K4a was prepared
- Dump site of the sludge from the waste water treatment plant
  - Sanitation works were completed
- Protection of the Bílina River at the dump site of sludge from the waste water treatment plant
  - Sanitation works were completed
- Catchment and separation drain
  - Sanitation works were completed
- Dump site of solid industrial waste, Dump site of lime sludge II, Dump site of lime sludge at the siding
  - Pollution by solid waste, crude oil products and lime sludge with phenols
- UHLODEHTA dump site
  - Pollution by carbon dusts, ashes, fly ashes, lime sludge and brown coal tars
- Southern adjoining areas of the ash dump sites
  - Pollution by fly ashes and crude oil sludge, pumping contaminated water
  - Crude oil sludge was removed and liquidated
- Remediation of underground water in the contaminated clouds on the premises
  - Pollution of underground water by crude oil hydrocarbons and phenols
  - Construction of sanitation systems in contamination clouds No. 2, 4, 5 and 7 was underway
  - Remediation works were completed in contamination clouds No. 3, 6 and 9
- Underground water monitoring
- Remediation of soil on the given premises as a part of the environmental service provided during investment projects
  - Soil pollution by crude oil hydrocarbons and phenols

*Unipetrol, Kralupy – industrial facility and other locations*

- Block 19 (acid waste)
  - Acid residues from refining gasoline
  - "Acid waste" area remediation feasibility study was submitted and approved
  - ČIŽP issued a decision for remediation of the location

- Nelahozeves dump site
  - Styrene residues in steel barrels
  - An AAR amendment was submitted and approved
  - ČIŽP issued a decision for the change of the deadline for completion of the remediation and for conducting the so-called “pre-remediation monitoring”
  - “Pre-remediation monitoring” at the specified location commenced
- Kralupy industrial facility
  - Contamination by refinery products and products from petrochemical production
  - Final draft of “Appendix 1 - updated risk analysis of the Kralupy nad Vltavou facility” was prepared
  - Operation of the “Protection Remediation Pumping of Contamination Cloud E” system commenced

*Benzina*

- Remediation of 58 contaminated gas station areas
  - Contamination by motor fuels
- Remediation of 13 contaminated areas of former distribution fuel warehouses
  - Contamination by motor fuels

*Paramo, Pardubice*

- Časy dump site
- Hlavečnick, Blato, Zdechovice and Nová Ves dump sites
- PARAMO main facility and its surroundings
- Dump site of acid resins (LIDL and ČSAD BUS locations)

*Paramo, Kolín (former Koramo)*

- Remediation of the soil and underground water
- Liquidation of the dump site of acid resins (old and new catchment lagoon)

## Progress of the remediation works in 2011

**As a part of the rectifying process of old environmental burdens (OSEZ), the following remediation works were conducted in 2011:**

Unipetrol, Litvínov:

- Remediation of underground water in the area of 3 contamination clouds and pumping of underground drains in the area of 4 contamination clouds was taking place on the premises of the company; Partial project for 2011-2012 was approved,
- Environmental service (supervision) – monitoring and soil biodegradation within the frame of 5 investment projects,
- Waste removal from the lagoons in Růžodol – all waste from the lagoons was removed and the area between the protection wall and the drainage intake facility of the Růžodol mound was subjected to final cleaning,
- The long-distance ethylbenzene pipeline in Miletice – a methodological change addressing the initial monitoring rounds pursuant to the new ČIŽP decision was approved and monitoring implemented.

Unipetrol, Kralupy:

- The operation of the protection remediation pumping of contamination cloud E in blocks 14 and 15 commenced,
- The Amendment of the updated risk analysis of the Nelahozeves dump site of barrels was submitted and approved,
- The 1<sup>st</sup> round of the “remediation” monitoring at the “Nelahozeves dump site” was executed.

Paramo, Pardubice:

- Biological restoration at the Blato monitoring location was implemented,
- Remediation pumping is underway and the update of the risk analysis at the Časy location was prepared and approved,
- Remediation, including biological restoration, was completed; post-sanitation monitoring at the LIDL and ČSAD BUS locations is underway,
- Remediation at the U Trojice location commenced (preparation of the documentation for the zoning and building proceedings),
- Building proceedings took place, the construction site was transferred and remediation works commenced at the Zdechovice location.

Paramo, Kolín:

- Remediation of the soil and underground water is underway,
- Removal and reprocessing of waste from the protection lagoons and deliveries of restoration materials was temporarily suspended in the summer.

BENZINA:

- Maintenance remediation works (protection remediation pumping) took place at the following gas stations: Mikulov, Pardubice, Přelouč, Vysoké Mýto and Tachov, and at the following distribution warehouses: Bartošovice, Jičín, Liberec, Nový Bohumín, Šumperk, Točnick.

**Other remediation works executed in 2011:**

- Pumping and cleaning underground water financed by Česká Rafinérská at the Litvínov facility (2 pollution centers at the area of the warehouses and the terminal) and the Kralupy facility (operation of a hydraulic barrier),
- Pumping underground drain at the Petrochemical station of the Litvínov facility, financed by Unipetrol RPA.

## Finances used in 2011

Summary of financial guarantees of the Ministry of Finances of the Czech Republic and used finances within the Unipetrol Group (including VAT)

	Unipetrol Litvínov	Unipetrol Kralupy	Benzina	Paramo Pardubice	Paramo Kolín	Group total
Financial guarantees of the Ministry of Finance of the Czech Republic	6,012.0	4,244.0	1,349.0	1,242.0	1,907.0	<b>14,754</b>
Expenses paid by the Ministry of Finance of the Czech Republic in 2011	306.0	1.6	24.0	23.0	108.0	<b>463</b>
Expenses of approved projects	3,053.0	47.0	402.0	356.0	1,619.0	<b>5,477</b>
Estimated expenses for future projects	3,645.0	1,412.0	933.0	2,908.0	362.0	<b>9,260</b>
<b>Total (estimated) Sanitation expenses</b>	<b>6,698.0</b>	<b>1,459.0</b>	<b>1,335.0</b>	<b>3,264.0</b>	<b>1,981.0</b>	<b>14,737.0</b>
Remaining balance of the financial guarantee of the Ministry of Finance	-686.0	2 785.0	14.0	-2,022.0	-76.0	<b>15</b>

## Sustainable development

### Global aspects of the protection of the environment

*Regulation of the carbon dioxide emissions in accordance with the EU carbon dioxide emission trading scheme (EU ETS).*

Based on Act No. 695/2004 Coll., on the Conditions of Greenhouse Gas Emission Allowance Trading and the related Regulation of the European Parliament and Council 2003/87/EC, the government issued, in the form of Government Directive No. 315/2005 from July 20<sup>th</sup>, 2005, on the National Allocation Plan for 2005-2007, tradable oxide dioxide emission permits for selected companies.

For the trading period of 2008 – 2012, the government issued the permits in the form of Government Directive No. 80/2008 from February 25<sup>th</sup>, 2008, on the National Allocation Plan.

#### Allocation of the allowances for the companies of the Unipetrol Group pursuant to the National Allocation Plan for the periods of 2005–2007 and 2008–2012 and the real CO<sub>2</sub> emissions during 2005 through 2011.

Allocation of permits (pieces/year) Real emissions (kilotons/year)	Unipetrol RPA	Česká Rafinérská	Paramo	Unipetrol Group
<b>Allocation pursuant to the NAP for 2005-2007</b>	<b>3,495</b>	<b>1,100</b>	<b>270</b>	<b>4,865</b>
<i>2005: real emissions of CO<sub>2</sub></i>	<i>3,071</i>	<i>803</i>	<i>194</i>	<i>4,068</i>
<i>2006: real emissions of CO<sub>2</sub></i>	<i>3,092</i>	<i>910</i>	<i>196</i>	<i>4,198</i>
<i>2007: real emissions of CO<sub>2</sub></i>	<i>2,889</i>	<i>904</i>	<i>191</i>	<i>3,984</i>
<b>Allocation pursuant to the NAP for 2008-2012</b>	<b>3,121</b>	<b>867</b>	<b>199</b>	<b>4,187</b>
<i>2008: real emissions of CO<sub>2</sub></i>	<i>2,762</i>	<i>910</i>	<i>176</i>	<i>3,848</i>
<i>2009: real emissions of CO<sub>2</sub></i>	<i>2,558</i>	<i>806</i>	<i>172</i>	<i>3,536</i>
<i>2010: real emissions of CO<sub>2</sub></i>	<i>2,468</i>	<i>883</i>	<i>170</i>	<i>3,521</i>
<i>2011: real emissions of CO<sub>2</sub></i>	<i>2,136</i>	<i>840</i>	<i>148</i>	<i>3,124</i>

The allowances allocated to the companies of the Unipetrol Group covered the needs of the companies and the real emissions during the first trading period of 2005–2007 as well as during 2008-2010 of the second trading period. Allowances surpluses will not be tradable in the future any more.

The companies of the Unipetrol Group complied with all requirements of Act No. 695/2004 Sb. and its implementation regulations, prepared the appropriate monitoring plans and, utilizing services of a professionally qualified person, complied with the obligations for the verification of the reported emissions.

In 2011, all companies of the Unipetrol Group were getting ready for the implementation of the Regulation of the European Parliament and Council 2009/29/ES. They participated in the creation process and commenting on the amendment of the Act on the Conditions of Greenhouse Gas Emission Allowance Trading. Moreover, they prepared and submitted completed applications for free allocation of the permits for the period of 2013-2020 to the Ministry of the Environment. The applications were processed based on the methodology issued by the European Council, using the benchmark values for individual activity types.

#### *Protecting the ozone layer of the Earth*

All companies of the Unipetrol Group operate their respective production facilities in accordance with the requirements for the protection of the ozone layer of the Earth and with the valid international agreements. Česká Rafinérská switched from using halons in its fire protection system to a more environmentally friendly solution already in 1999. Chemopetrol (today Unipetrol RPA) replaced the cooling media in its low-temperature petrochemical facilities by more environmentally friendly media already during previous years.

### Chemical safety

All companies of the Unipetrol Group handle chemical substances and chemical mixtures in accordance with the valid act on chemical substances and chemical agents as well as with Regulation of the European Parliament and Council No. 1907/2006 (REACH).

The jointly classify all their chemical products, which they introduce to the market, and, based on determined

characteristics of these products, prepare their safety sheets, format and content of which comply with the requirements of Appendix II of the REACH Regulation. Safety sheets are provided free of charge to all customers and, at the same time, placed on the websites of the companies. Pursuant to the REACH Regulation, the safety sheets of the produced as well as purchased hazardous chemical substances and mixtures (agents) in Unipetrol RPA are made available to all employees via the INTRANET computer network. ČESKÁ RAFINÉRSKÁ, a.s. makes the safety sheets of produced products available on the company's intranet network; the company also operates an extranet portal for its processors and shareholders with safety sheets available in three languages.

All companies of the group continuously monitor handling processes related to chemical substances and mixtures (agents), from the raw material stage all the way to the final production stage, and comply with the appropriate valid legal regulations, including the process of obtaining certificates for specific applications of selected products – for example, certificates on health safety for contact with food and drinking water, medicinal use, etc. The companies operate a customer service, which provides detailed information about product characteristics in relation to their particular use.

The companies of the group are subject to the international UN inspections (UN-OPCW), which focuses on the inspecting compliance with the obligations of the “Chemical Weapons Convention”. International inspections of the companies from the group conducted so far have demonstrated thorough compliance with the obligations of the “Convention”.

#### *Complying with the obligations specified by Regulation of the European Parliament and Council No. 1907/2006 (REACH)*

On June 1<sup>st</sup>, 2007, Regulation of the European Parliament and Council No. 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), came into effect. This regulation sets a new European legislative standard for the chemical industry within the unified EU market.

The UNIPETROL Group belongs in the part of chemical industry, which is characterized by a high-volume production of chemical substances of over 1,000 tons/year. All produced products, including the related secondary products that are produced simultaneously, are subject to the obligations specified by the REACH regulation. In June 2008, the REACH process entered its pre-registration stage, during which (by December 1<sup>st</sup>, 2008) individual producers were obliged to submit basic identification data on the substances that are subject to REACH to the European Chemical Agency (ECHA). During this stage, Česká Rafinérská pre-registered 43 substances, PARAMO 51 substances and UNIPETROL RPA 58 substances.

The first registration stage, with a specified deadline for submitting registration applications by November 30<sup>th</sup>, 2010, was designed for substances that are produced in a greater volume than 1,000 tons/year. During this stage, Česká Rafinérská submitted registration applications for 24 substance, PARAMO registered 22 substances and UNIPETROL RPA 17 substances. As a part of the registration process, the companies of the UNIPETROL Group closely cooperated with PKN Orlen and, through it, with professional consortia CONCAWE and LOA, which were involved in the preparation process of documentations for majority of the chemicals produced by the companies in the Unipetrol Group. Česká Rafinérská and UNIPETROL RPA also cooperated with other consortia such as FERC, R4CC, CB4REACH, ASVEP, etc., which were preparing registration documentations for yet other produced chemicals. The registration process was followed by the stage of evaluating compliance and accuracy of the submitted registration applications. Whenever discrepancies or insufficient quality of the inspected data are determined, the ECHA Agency, pursuant to its competencies, issues a decision on amending the given information. In 2011, pursuant to the above stated process, UNIPETROL RPA updated one of its submitted registration documentations in accordance with the requirements of the Agency.

#### *Compliance with the obligations pursuant to Regulation of the European Parliament and Council No. 1272/2008 (CLP)*

In 2010, Regulation of the European Parliament and Council No. 1272/2008 on the Classification, Labeling and Packaging of Substances and Mixtures (CLP) came into effect. The regulation contributes to global harmonization of the criteria for the classification and labeling with the objective to make worldwide trading with chemical products easier.

Besides classifying their substances in accordance with the new rules, the companies of the UNIPETROL Group had to also comply with the obligation to nominate substances that they intend to register during the 2<sup>nd</sup> and 3<sup>rd</sup> registration waves and substances that are excepted from the registration obligation, which the companies intend to introduce to the market. As a part of the notification process, the notifiers has to submit to the ECHA Agency data related to the identification of the given substances and their classification, prepared pursuant to the CLP rules. Based on the received notification, the ECHA Agency will publish a list of the substance classifications on its website and will attempt to create a platform, which should simplify the communication with the notifiers, with the objective to achieve, by the means of a discussion, a unified classification for each reported substance.

#### *Safety sheets*

Based on the data on the substances included in the submitted registration documentations, new safety sheets were prepared for the products that the companies of the UNIPETROL Group introduce to the market. Obligatorily, these safety sheets include substance classifications pursuant to the DSD/DPD system as well as the new classifications pursuant to the CLP Regulation. Moreover, exposition scenarios have to be attached to the safety sheets. This represents a brand new document format, which includes a description of the

recommended operational conditions and a list of risk management measures for the production as well as all identified usages of the given product. Compliance with the described measures shall eliminate or minimize the hazards related to health and the environment, identified during the process of evaluating chemical safety and determining risks of the given substance during the registration documentation preparation stage.

## Management of the primary sources of raw materials and utilities

In the area of saving primary sources of raw materials and energies, the Unipetrol Group conducts its operations based on the sustainable development principles, focuses its basic strategies on such innovative procedures that lead to minimizing the energy and material inputs, and encourages continuous improvement of its environmental performance. The companies of the group were subjected to energy audits with the objective to achieve yet further energy savings.

Significant savings are especially achieved by a better utilization of primary sources. For example, Česká Rafinérská implemented an extensive modernization program, objective of which was a deeper processing of crude oil for the benefit of the so-called light products, especially fuels.

In 2006, Česká Rafinérská commenced several projects that were included under a single name "Biofuels" program. The program focused on environmentally friendlier acquiring of non-renewable resources by adding some agricultural products, which belong among renewable sources, into motor fuels. The Biofuels program was implemented with the objective to secure logistics, acceptance, storage and additions of bio-components, and storage and release of biofuels. Both refineries of the company now produce gasoline and motor diesel with added bio-fuels in accordance with the appropriate legislative requirements and requirements of individual processors.

The Unipetrol Group has been paying attention to water savings for a long time. It has been especially Paramo, which has achieved significant results in this area by implementing enclosed cooling circulation circuits. A newly established Paramo chemical treatment facility of cooling water had led to a reduction of the volume of wasted water and thus to a reduction of the consumption of additional water.

In the area of reducing energy demand, PARAMO implemented three projects: installation of two additional heat exchangers at HOSD led to a significant reduction of the natural gas consumption for heating the hydrogenation furnaces and, at the same time, a measure for utilizing the high-pressure residual gases at HOSD was implemented. The selective refining facility was subjected to a pilot project of steam cooling.

### Water consumption in the group (million m<sup>3</sup>/year)

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	24.2	22.5	23.7	22.2	24.5	23.0	22.0	20.0
Česká rafinérská	1.4	0.8	2.0	1.7	1.8	1.8	2.9	2.7
Paramo	1.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Unipetrol Group	27.2	24.3	26.7	24.9	27.3	25.8	25.8	23.7

The stabilized energy consumption of the Unipetrol Group is accompanied by a significant production growth. Development of energy efficiency of the production processes is therefore better demonstrated by the following table of the specific energy consumption, expressed by the coefficient of energy consumption in tons of the crude oil equivalent (COE) applied to the overall annual production in tons:

### Energy consumption in the group (thousand TJ/year)

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	6.0	5.1	5.6	5.3	4.8	9.8	10.1	9.4
Česká rafinérská	12.0	13.8	15.1	13.6	16.8	16.6	14.6	12.6
Paramo	0.8	1.0	2.8	2.7	2.7	2.6	2.4	2.9
Unipetrol Group	18.8	19.9	23.5	21.6	24.3	29.0	27.0	24.9

Note: The data applied to Paramo for 2004 and 2005 do not include the former Koramo

### Specific energy consumption in the group (TOE/ton production per year)

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	0.171	0.166	0.173	0.163	0.154	0.178	0.176	0.179
Česká rafinérská Litvínov	0.038	0.037	0.038	0.035	0.032	0.034	0.049	0.053
Česká rafinérská Kralupy	0.051	0.053	0.056	0.056	0.057	0.053	0.058	0.056
Paramo HS Pardubice	0.079	0.093	0.096	0.087	0.086	0.097	0.106	0.115
Paramo HS Kolín	0.384	0.227	0.303	0.297	0.221	0.355	0.333	0.245



## Occupational health and safety and fire protection

Unipetrol Group considers occupational health and safety and fire protection to be one of the top values of its corporation policies. The companies of the Unipetrol Group:

- Improve working conditions and adopt measures for securing occupational health and safety and fire protection in compliance with the appropriate regulations and standards;
- Improve the risk evaluation methods and prevention of injuries and work related illnesses;
- Adopt measures for increasing work productivity;
- Develop skills of their employees and adopt measures for improving quality of the work environment;
- Inform their employees and the public about the valid internal standards related to occupational health and safety and fire protection and about their impact.

### Injury rate

The total number of recorded injuries within the UNIPETROL Group in 2011 has significantly dropped in comparison with 2010. That especially applies to injuries resulting in work disability. The decrease was positively influenced by systematic measures of a short-term, development and conceptual character adopted in 2011.

In 2011, no fatal injury of employees of the UNIPETROL Group was recorded.

Positive results for 2011 in the area of injuries recorded by most companies of the Unipetrol Group was negatively influenced by a relatively significant increase of the number of injuries resulting in work disability in Paramo and by a fatal injury of a contractor at Unipetrol RPA.

The high level of occupational safety, achieved by the Unipetrol Group throughout the years, are demonstrated by the following data:

### Frequency of injuries in the Unipetrol Group (number of injuries per 100 employees)

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	0.27	0.24	0.17	0.27	0	0.24	0.26	0.06
Česká rafinérská	0.4	0.3	0	0.3	0.14	0.45	0.15	0
Paramo	0.11	0	0.7	0.49	0.39	0.28	0.3	0.92
Benzina	0.52	0.61	0	0	0	0	0	0
Unipetrol doprava	1.34	2.33	0.58	0.81	0.41	0.22	0.46	0

### Frequency of work injuries (number of injuries / one million worked hours)

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	1.62	1.46	1.02	1.71	0	1.45	1.53	0.33
Česká rafinérská	2.4	1.7	0	1.7	0.8	2.8	0.89	0
Paramo	0.63	0.68	4.21	2.94	2.31	1.65	1.74	5.39
Benzina	3.15	3.55	0	0	0	0	0	0
Unipetrol doprava	7.67	13.01	3.28	4.54	2.25	1.18	2.42	0

### Number of fatal injuries

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	0	0	0	0	0	0	0	0
Česká rafinérská	0	0	0	0	0	0	0	0
Paramo	0	0	0	1	0	0	0	0
Benzina	0	0	0	0	0	0	0	0
Unipetrol doprava	0	1	0	0	0	0	0	0
Unipetrol group	0	1	0	1	0	0	0	0

**Number of recorded work injuries**

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	28	14	11	13	10	14	14	7
Česká rafinérská	7	9	9	10	3	4	7	4
Paramo	12	8	20	14	8	3	2	13
Benzina	1	1	0	0	0	0	0	0
Unipetrol doprava	25	22	10	11	9	1	8	3
<b>Unipetrol group</b>	<b>73</b>	<b>54</b>	<b>50</b>	<b>48</b>	<b>33</b>	<b>23</b>	<b>31</b>	<b>27</b>

**Number of work injuries resulting in work disability exceeding 3 days**

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	7	6	4	6	0	5	5	1
Česká rafinérská	3	2	0	2	1	3	1	0
Paramo	1	1	6	4	3	2	2	6
Benzina	1	1	0	0	0	0	0	0
Unipetrol doprava	7	11	3	4	2	1	2	0
<b>Unipetrol group</b>	<b>19</b>	<b>21</b>	<b>13</b>	<b>16</b>	<b>6</b>	<b>11</b>	<b>10</b>	<b>7</b>

*Occupational illnesses*

In 2011, no occupational illness was recorded in the companies of the Unipetrol Group.

**Number of new cases of occupational illnesses**

Year	2004	2005	2006	2007	2008	2009	2010	2011
Unipetrol RPA	0	0	0	1 <sup>1)</sup>	1 <sup>1)</sup>	0	0	0
Česká rafinérská	0	0	0	0	0	0	0	0
Paramo	0	0	0	0	0	0	0	0
Benzina	0	0	0	0	0	0	0	0
Unipetrol doprava	0	0	0	0	0	0	0	0
<b>Unipetrol group</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1)</sup> Illness arising from polycyclic condensed hydrocarbons

*Prevention, personal protection tools and aids*

Occupational safety prevention is secured by professionally qualified workers in the area of risk evaluation, who conduct inspections of individual worksites. Personal protection aids are issued to employees of the companies based on the actual risk evaluation.

*Quality of the work environment*

Based on the executed work categorization, the conditions of the work environment at the companies of the Unipetrol Group are regularly verified by measuring the work environment factors, especially the exposure of employees to noise, chemical substances and dust. The measurements conducted in 2011 confirmed the decreasing number of exceeded permitted exposure limits and the highest permitted concentrations.

*Health care and prevention*

The companies of the Unipetrol Group have concluded contracts with individual physicians for providing the appropriate preventive health care. Medical preventive exams are conducted in accordance with the specified legal regulations and the appropriate decisions of the Hygienic Service.

## Important milestones of the UNIPETROL group in 2011 from the perspective of the protection of the environment and occupational health and safety

### Unipetrol

- Successful re-certification audit of the LRQA certification agency related to compliance with the requirements of ISO 14001, ISO 9001 and OHSAS 18001 and repeated defense of the Responsible Care program
- Completion of the waste removal from the lagoons at the Růžodol location
- Commencement of the protective remediation pumping at the Kralupy facility financed by the Ministry of Finances

### Unipetrol RPA

- Completing total Turnaround without work injuries and important negative impacts on the environment
- Successful re-certification audit of the LRQA certification agency related to compliance with the requirements of ISO 14001, ISO 9001 and OHSAS 18001 and repeated defense of the Responsible Care program
- Executed emergency training with the objective to verify functionality of the Internal Emergency Plans in accordance with Act No. 59/2006 Coll. on the Prevention of Major Accidents
- Implementation of a verification training on the assistance system for transporting hazardous goods TRINS and all the other participating European centers within the frame of CEFIC (European Chemical Industry Council )
- Significant decrease of the emissions of biological and nitrogen pollution from Biological Waste Water Treatment
- Shutdown of the outdated T 200 heating plant

### Unipetrol Doprava

- Successful re-certification audit of the LRQA certification agency related to compliance with the requirements of ISO 14001, ISO 9001 and OHSAS 18001 and repeated defense of the Responsible Care program
- Executed emergency training with the objective to verify functionality of the Internal Emergency Plans in accordance with Act No. 59/2006 Coll. on the Prevention of Major Accidents at all facilities assigned to group B (5x), in cooperation with Fire Brigade of the facility owners

### Benzina

- Successful re-certification audit of the LRQA certification agency related to compliance with the requirements of ISO 14001, ISO 9001 and OHSAS 18001
- Successful standardization of the activities in the area of waste management throughout the entire network of gas stations
- Completion of the Benzina Plus program – gas station renovation (modernization), renovation of the car wash facilities and water management of 20 gas stations
- Commencement of the remediation works of some locations financed by the Ministry of Finances

### Česká Rafinérská

- On December 31<sup>st</sup>, 2011, the employees of ČESKÁ RAFINÉRSKÁ, a.s. and its contractors reached 2.9 million working hours without injuries that would result in work disability
- The frequency of work injuries resulting in work disability for 2011 was at 0.9
- In 2011, ČESKÁ RAFINÉRSKÁ, a.s. implemented the “HSSE qualification 2011“ training
- At the end of September and beginning of October 2011, turnaround was implemented in the Litvínov refinery, during which no injury resulting in work disability or injury that would had required medical attention was recorded
- Procedural HSE audit in two stages (the 1<sup>st</sup> stage of the audit in September and the 2<sup>nd</sup> stage of the audit in December 2011) took place at ČESKÁ RAFINÉRSKÁ, a.s.

**Paramo**

- Commencement of the “Renovation of the Storage Reservoirs, including Implementation of Emergency Reservoir PS 0404” investment project co-financed by OPŽP
- Commencement of remediation works at the Zdechovice and Sv. Trojice locations financed by the Ministry of Finance
- Preferential combustion of natural gas in both boiler rooms of the refinery reduced the overall emissions produced by the combustion source.

## Contact persons in the companies of the Unipetrol Group for environmental matters

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