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Joint Report on Occupational Health  
and Safety and on the Protection of the  
Environment of the Unipetrol Group for 2012

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## Important Milestones of the Unipetrol Group in 2012

### Basic economic data of the Unipetrol Group for 2012, consolidated data

<b>Own capital (thousands CZK)</b>	<b>29,528,493</b>
Basic capital (thousands CZK)	18,133,476
Revenues total (thousands CZK)	107,280,986
Economic result before taxes (thousands CZK)	(4,687,771)
Economic result for the accounting period (thousands CZK)	(3,413,886)
Dividends (CZK)	0
Average annual re-calculated number of employees	3,705
Investments total (millions CZK)	1,346,201

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# I. Unipetrol Group in 2012

## 1.1. Brief history of the Unipetrol Group

### 1994

- The establishment of the Unipetrol joint stock company represented one of the gradual concept steps in the process of privatizing the Czech petrochemical industry. Unipetrol was supposed to merge selected Czech petrochemical companies into a formation that would be able to compete with strong supranational corporations. The Czech state with its 63% of the shares, represented by the National Property Fund, was the majority shareholder of the company. The remaining shares were owned by investment funds and small shareholders. Based on the original concept, the share of the state was supposed to be eventually privatized.
- The following joint stock companies had been gradually incorporated in the Unipetrol Group: Kaučuk, Chemopetrol, Benzina, Paramo, Koramo, Česká Rafinérská, Unipetrol Trade, Spolana and Unipetrol Rafinérie.

### 2000

- Starting in 2000, other important acquisitions had been implemented as well. PARAMO, a.s., SPOLANA, a.s., UNIPETROL TRADE, a.s., and UNIPETROL RAFINÉRIE, a.s., all became parts of the Unipetrol Group.

### 2003

- Merger of KORAMO, a.s., and PARAMO, a.s. – PARAMO, a.s. became the successor company.
- Česká Rafinérská began to revise its refinery.

### 2004

- The contract for selling 63% of the shares of UNIPETROL, a.s. was concluded between PKN ORLEN S.A. and the National Property Fund.

### 2006

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

### 2007

- Sale of the subsidiary KAUČUK, a.s., to the Polish Firma Chemiczna Dwory S.A.
- The new subsidiary UNIPETROL SERVICES, s.r.o. commenced its activities
- Change of the legal form of Unipetrol Doprava, Benzina and Petrotrans from joint stock companies 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

- In the beginning of the year, the Board of Directors of Unipetrol approved an investment intention to extend the product portfolio of Unipetrol RPA by new monomers.
- On June 26<sup>th</sup>, 2008, General Assembly of Unipetrol decided to pay dividends from the undistributed profit from previous years amounting to a total of 3,200,558,584.60 CZK.
- Unipetrol increased its share in Paramo to 91.77% by purchasing 49,660 of its shares. In October, Unipetrol announced its intention to purchase the remaining shares from the minority shareholders.
- Based on the approved concept of introducing the integrated management system throughout the entire group, a pilot project took place between October 1<sup>st</sup> and 17<sup>th</sup>. As a part of this project, five selected companies were successfully certified (Unipetrol, Unipetrol RPA, Unipetrol Doprava, Unipetrol Services and Benzina).

## 2009

- Unipetrol became the only owner of Paramo. Mr. Milan Kuncíř became the new general director of Paramo.
- Towards the end of May, Unipetrol RPA definitively closed down its oxo-alcohol production unit, which had been in operation since 1969.
- In June, a contract on transporting and storing crude oil in the Slovak Republic during 2009 was concluded by Transpetrol, Česká rafinářská and Paramo.
- In September, Benzina came with an important improvement of its fuel portfolio when, as the first company on the Czech fuel market, introduced a new formula of its premium fuel Verva with cetane number 60. Benzina began to sell this product at 130 gas stations.
- In the 4<sup>th</sup> quarter of 2009, Benzina began to discontinue the sale of the already outdated petrol Speciál 91, which had been rapidly losing its position on the market. The company plans to completely discontinue the sale of the product during the 2nd half of 2010.
- On December 10<sup>th</sup>, the Supervisory Board of Unipetrol named Mr. Pieter Chelmiński, until then a member of the Board of Directors of the company and administration director, to become the new Chairman of the Board of Directors and general director of the company.
- Artur Paździor became a new executive of Unipetrol RPA.
- The Unipetrol Group fulfilled the objectives of the optimization plan, resulting in significant savings of the fixed as well as variable expenses. Moreover, the investment expenses of the group were reduced as well.

## 2010

- UNIPETROL, a.s., and Unipetrol RPA decided to transfer its shares in Celio to TICATANOR, s.r.o. and B.E. Fin S.A. Celio conducted its business in the waste management area and its sale complied with the strategy of the Unipetrol group, objective of which was to focus more on individual strategic segments.
- The joint company of Unipetrol and Synthos Kralupy, Butadien Kralupy, a.s., commenced its production in its new butadiene units. Investments amounting to 1.2 billion CZK are supposed to replace the existing production unit operated by Synthos Kralupy.
- The new units increased its production capacity from the original 90 to 120 kt per year, which places the company among the 10 largest butadiene manufacturers in Europe.
- Unipetrol concluded a repeated cooperation contract with the Institute of Chemical Technology, Prague. The Unipetrol Group had been a strategic partner of ICT for nine years.
- A new time schedule for closing the T200 thermal power plant in the Chempark in Záluží was introduced. The T200 thermal power plant represented an outdated energy and steam source and its operation – starting in 2012 – is supposed to comply with the appropriate legislative requirements.
- After its closure, the energy service unit of Unipetrol RPA will continue to operate the newer T700 thermal power plant.
- Mr. Mariusz Kędra became a new member of the Board of Director and financial director of Unipetrol. After three years in the position of the financial director of the Unipetrol Group, Mr. Wojciech Ostrowski left.
- Unipetrol will build a training and research center UniCRE. The center, which will merge research and scientific work with training activities, is supposed to be built on the premises of the Záluží industrial facilities. The total cost related to building the center was estimated to reach almost 800 million Czech crowns. The project will be subsidized by the European Union by the amount of 600 million Czech crowns.
- Benzina commenced its cooperation with the fast food chain Burger King, which opened its first branch along a highway in the Czech Republic at the Benzina gas station on the third kilometer of highway D11 in the direction towards Prague.
- Paweł Kania became a new executive of Benzina.

## 2011

- In the beginning of the year, as a part of the restructuring process of the refinery segment, two new subsidiaries of PARAMO, a.s. were established: Paramo Oil, s.r.o., and Paramo Asphalt, s.r.o.
- As a part of the restructuring process of the Unipetrol Trade Group, dissolution of UNIPETROL TRADE, a.s. was completed on September 27<sup>th</sup>, 2011.
- At the end of the 3<sup>rd</sup> and beginning of the 4<sup>th</sup> quarters, the refinery and petrochemical operations in Litvinov were temporarily shut down in accordance with the plan. Such shutdowns take place every four years.
- The Unipetrol Group became the general partner of the 2011 International Year of Chemistry in the Czech Republic, announced by UNESCO and the International Union of Pure and Applied Chemistry.
- Benzina launched its first, fully self-serve gas station on the Czech market under the name of Expres 24.
- Three companies of the Unipetrol Group successfully defended their Responsible Care in Chemistry certifications, awarded by the Association of Chemical Industry of the Czech Republic. Unipetrol, Unipetrol Doprava and Unipetrol RPA are thus able to use the Responsible Care logo.
- In November, the value of the production of high-density polyethylene in Unipetrol RPA exceeded 5 million tons.
- The company has been manufacturing polyethylene since 1976 and currently produces 950 to 1,000 tons of polyethylene a day.
- Paramo introduced a new line of high-performance motor oils Mogul Professional.
- Paramo acquired the European ETA technical certificate for its hydro-insulation Gumoasfalt roof system.



## 2012

- In January, Paramo Asfalt s.r.o. signed two 5-year contracts on delivering asphalt; the first one with PARAMO, a.s., and the second one with UNIPETROL RPA, s.r.o. The transfer of business activities related to asphalts within the frame of the Unipetrol Group formed a part of the restructuring strategy related to refinery assets.
- In June, the executives of UNIPETROL RPA, s.r.o., approved permanent closure of the urea production unit at the Záluží Chempark in Litvínov as of January 2<sup>nd</sup>, 2013. The urea production unit was a part of the agro division of UNIPETROL RPA, s.r.o. Its results had a negative impact on the profitability of the entire Unipetrol Group during the previous years and, moreover, no change in this trend was expected.
- In July, the Unipetrol Group announced permanent closure of its crude oil processing unit at the Paramo's Pardubice refinery. The decision was adopted based on a complex analysis of the macroeconomic situation, including low refinery margins in comparison with the period before the financial and economic crisis in 2008, weak demand for diesel and a surplus of the refinery capacities in Europe. Yet other key factors proved to be a low conversion capacity (less than 1 million tons per year) and a low complexity of the Paramo refinery, which had negatively influenced profitability of this asset of the group. Moreover, the analyzed scenarios came to a conclusion that no fundamental improvement from the medium-term perspective can be expected.
- In October, PARAMO, a.s. and ORLEN Asfalt Sp. z o. o. from the PKN Orlen mother group, concluded a purchase contract, based on which ORLEN Asfalt, as the purchaser, acquired from Paramo, as the seller, 100% business share in Paramo Asfalt s.r.o. The purchase price for the 100% of the business share amounted to 116.1 million Czech crowns. The sale of Paramo Asfalt to ORLEN Asfalt represented yet another step in the restructuring process of Paramo and in optimizing refinery assets, a part of which was the transfer of the commercial activities of Paramo in the area of asphalt products to Paramo Asfalt in January 2012.

## 1.2. Introduction of the Unipetrol Group

The group is engaged in refinery and petrochemical production and sales in the Czech Republic as well as in the entire Central Europe. Individual companies of the group especially manufacture 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. Unipetrol is one of the leading refinery and petrochemical groups in the Czech Republic and an important player in the Central and Eastern Europe. The groups focuses on three strategic business segments:

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

### UNIPETROL, a.s., is 100% owner of the following companies:

- UNIPETROL RPA, s.r.o., manufacturer and trader of refinery, petrochemical and agrochemical products;
- BENZINA, s.r.o., operator of the largest network of gas stations in the Czech Republic;
- UNIPETROL DOPRAVA, s.r.o., professional railway transporter of not only chemical and petrochemical products, including all related services (UNIPETROL RPA, s.r.o. owns 99.88% of the shares);
- PARAMO, a.s., the largest manufacturer of asphalts, lubricating and heating oils and other refinery products;
- UNIPETROL SERVICES, s.r.o., support center for all companies of the group.

### Other significant assets:

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

### The Unipetrol Group also includes two research and development companies, which achieve exceptional results with important application abilities in practice:

- Výzkumný ústav anorganické chemie, a.s., (VÚAnCh),
- POLYMER INSTITUTE BRNO, s.r.o.

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

Refinery products: petrol, motor diesel, light heating oil, aircraft fuel, LPG, asphalts, primary gasoline, lubricating and heating oils.

Petrochemical products: ethylene, propylene, C4 fractions, benzene, high-density polyethylene, polypropylene, ammonia, urea, Chezacarb.

### 1.3. Business profile of the main subsidiary companies of the Unipetrol Group

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

A logical continuation of the implementation of a new management module, to which the Unipetrol has been gradually transferring since 2007, is the merger of CHEMOPETROL, UNIPETROL RAFINÉRIE and UNIPETROL RPA into Unipetrol RPA (refinery, petrochemistry, agrochemistry).

Its main advantages include simplified the flows of intermediate products within the frame of a single company and a better exploitation of the existing synergies. Another positive aspect is a greater efficiency of internal purchases and sales of the company's own products within the group. Last but not least, this change will enable a better control over the entire production and trade chain, from the purchase of crude oil to customer care. The merger created a single, compact unit, inside of which the organizational, personnel, administrative and logistic structure of individual activities was simplified.

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

#### CHEMICAL PRODUCTION UNIT

The unit operates the following production units:

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

It also secures investment processes for the entire company and activities of the fire rescue unit and the control room.

#### ENERGY SUPPLY UNIT

The units supplies all facilities with needed energies (electricity, steam) and water; the unit also secures waste water treatment for the entire complex.

#### SUPPLY CHAIN MANAGEMENT

The unit secures the logistics of plastic products, urea and Chezacarb.

#### REFINERY UNIT

The unit conducts business in the area of crude oil processing. In compliance with the ownership rights of Unipetrol, it plans and manages crude oil processing in Česká Rafinérská into final products based on the needs of the related production units in the group. It is the most important entity in the wholesale area of crude oil products on the Czech market. Its main subjects of business are:

- Complex acquisitions of raw material for petrochemical productions of the Unipetrol Group;
- Wholesale of motor fuels and other refinery products;
- Purchasing crude oil for the refinery production facilities of the Unipetrol Group;
- Optimization of the connection between refinery and petrochemical production facilities with emphasis on a maximum utilization of synergies of individual technological units;
- Optimization of refinery production facilities of the Unipetrol Group.

#### Main products of the unit:

Motor fuels (lead-free petrol Normal 91, Super 95, Super plus 98, aircraft petrol, motor diesel), heating oils (extra light heating oil, heavy heating oil R2), asphalts, road asphalts, liquefied crude oil products, propane, propylene, propane-butane, LPG, butane, N-butane, raffinate II, oil hydrogenates, stabilized oil hydrogenates, other refinery products, primary gasoline, liquid sulphur, MTBE.

## UNITS OF MONOMERS AND AGROPRODUCTS

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

- Acquisition of raw materials for the production of polyolefins at the Unipetrol Group;
- Sale of petrochemical products, ammonia and urea;
- Development and strategy of petrochemical and chemical productions.

### Main products of the unit:

Olefins and aromas, ethylene for polymerization, propylene for polymerization, petroleum benzene, C4 fractions, C5 fractions, C9 fractions – re-distilled, naphthalene concentrate, pyrolysis heating oil, agrochemicals, ammonia, ammonia technical water, urea, soot, sorbents and highly conductive soot.

## POLYOLEFINE UNIT

The unit is engaged in the segment of plastic materials - polyolefins. It plans the production at the polypropylene and high-density polyethylene production facilities and secures the sale of finished PP and HDPE products. In cooperation with the research and development center at the Polymer Institute in Brno, BU III secures and participates in the modification of the existing and development of new polyolefinic products. BU III is the most important supplier of polyolefins on the market in the Czech Republic. Moreover, considering its 5% share of the European HDPE capacities and 2% share of European PP capacities, it is also an important player especially in Central Europe. Main activities:

- Sale of the PP and HDPE products;
- Coordination of the research and development activities in the area of polyolefins, implemented at the Polymer Institute in Brno;
- Technical services and consultations for the existing as well as potential customers.

### Main products of the unit:

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

## ČESKÁ RAFINÉRSKÁ, a.s.

ČESKÁ RAFINÉRSKÁ, a.s., Litvínov is a production company that conducts its business in the area of crude oil processing. It also operates refineries in Litvínov and Kralupy nad Vltavou. It is a joint enterprise of three shareholders: Unipetrol (51.23%), Eni (32.44%) and Shell (16.33%)

The main products shipped from both refineries are car petrol, motor diesel, aircraft fuel, heating oils, liquid gases (LPG), asphalts, raw materials for petrochemical production, for the production of lubrication oils and for products for other industrial use.

Since August 2003, Česká rafinérská is a processing refinery, which means that it processes crude oil supplied by its owners or its domestic trade companies. They sell products on the domestic as well as foreign markets in a volume that corresponds to their ownership share.

## BENZINA, s.r.o.

As of December 31<sup>st</sup>, 2012, Benzina was operating 338 gas stations with a wide portfolio of fuels with additives. A selected segment of the gas station offers a collection of the premium VERVA fuels and also a wide assortment of other goods, refreshments and services. In 2006–2009, this network was gradually renovated and modernized. Currently, the network is profiled into two segments, a premium segment, represented by 117 Benzina Plus gas stations on the domestic market, and a segment represented by the Benzina standard portfolio. At the end of 2010, a total of 320 station from both segments had been modernized.

Based on the available data, in 2011 and 2012, the company had a market share of 13.7%. Considering the state and development of the macroeconomic factors of the Czech economy, the situation caused by tax frauds and the progress in the area of biofuels and vehicle fleets, the development of the company's market share corresponds to the difficult situation on the market. The total number of all gas stations on the market has slightly increased by 1.5%. However, due to the growth of the household energy cost, food, rent and medical expenses, and concerns about the further overall development, the demand for, especially, petrol has been decreasing.



**PARAMO, a.s.**

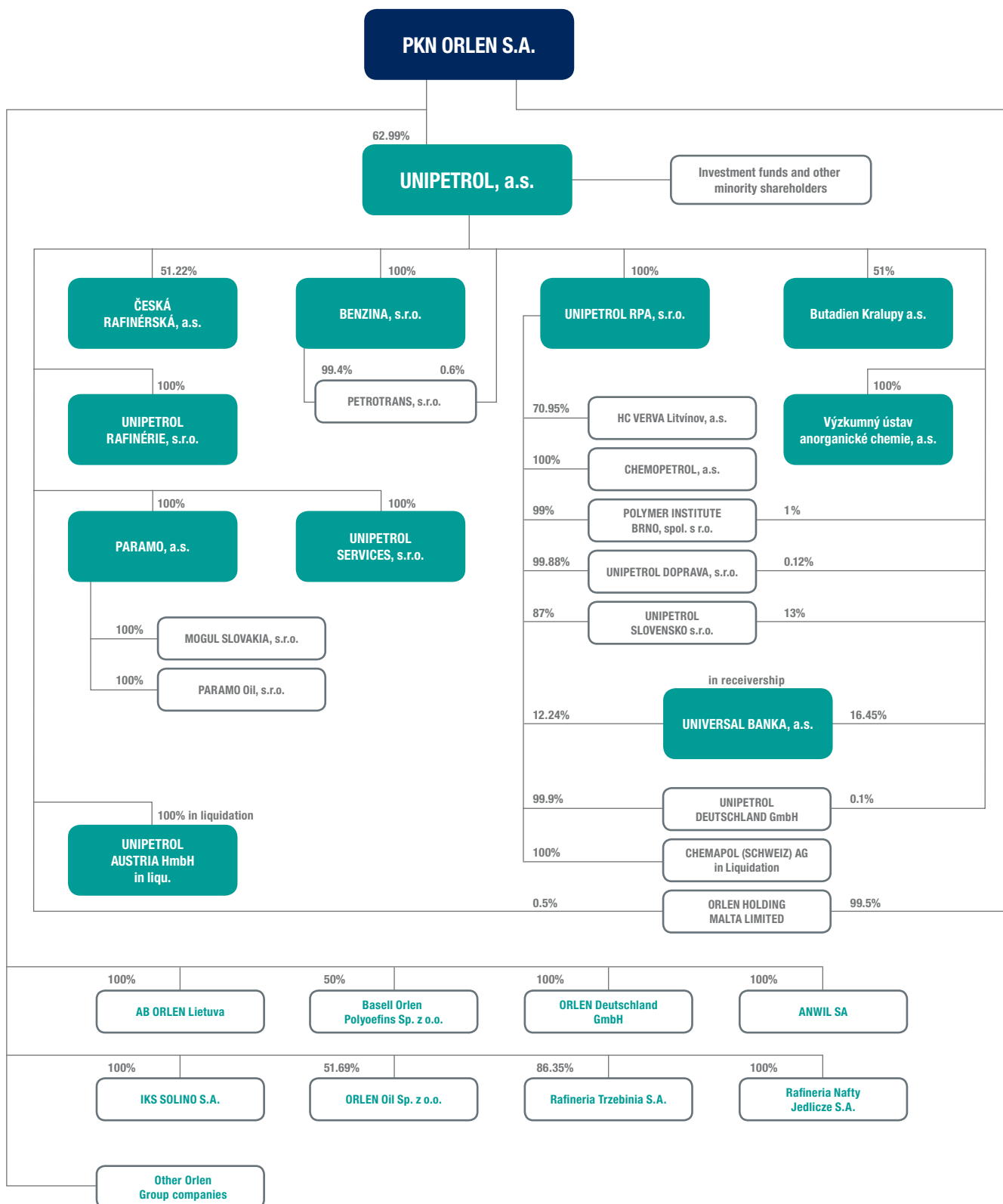
The joint stock company PARAMO manufactures asphalt products and lubrication and procedural oils, including related and auxiliary products. Since 2003, the refinery purchases and processes oil hydrogenates and hydrocrackates for the technology located in Kolín. The company uses the acquired intermediate products for the production of basic and lubricating oils with a very low content of sulphur. In 2012, crude oil processing was terminated at the center in Pardubice – production is implemented from imported semi-finished products. The company sells its products mainly on the domestic market.

An advantage of the company is its wide range of products and the most modern basic Biturox unit in the area of asphalts in the region, which was put into operation during the last quarter of 2006.

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

The Shared Service Center/SSC was established on January 1<sup>st</sup>, 2007. It was mainly created by transferring administrative and support activities from the following companies: Unipetrol, Chemopetrol, Unipetrol Doprava, Benzina and Unipetrol Trade. Later on, it was incorporated into the new company UNIPETROL SERVICES, s.r.o. The company has been gradually expanding the number of serviced companies within the Unipetrol Group as well as outside of it.

The mission of Unipetrol Services is to provide its services to the other companies in the group and to companies outside of it, to make the provided services even more efficient and to reduce their expenses.

Asset structure of UNIPETROL, a.s. as of December 31<sup>st</sup>, 2012

# II. Joint Policy of Responsible Care in Chemistry and of the Integrated Occupational Health and Safety, Protection of the Environment and Quality Management System

In November 2007, the Board of Directors of UNIPETROL, a.s., approved the “Policy of responsible care in chemistry and of the integrated occupational health and safety, protection of the environment and quality management system,” which followed the previous “Joint environmental policy of the Unipetrol Group” from 1999 and which reacts to the new structure of the group and new impulses in the area of social responsibility of the company (Corporate Social Responsibility – CSR).

## **POLICY OF RESPONSIBLE CARE IN CHEMISTRY AND OF THE INTEGRATED OCCUPATIONAL HEALTH AND SAFETY, PROTECTION OF THE ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM**

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

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

As a member of the Orlen Group, the Unipetrol Group complies with the principles of the Global Charter of the “Responsible Care” program, permanently sustainable development and social responsibility.

The Unipetrol Group considers the development, production and transport of individual products with minimized risks of negative impacts on the health of people and the environment to be its priority. In order to limit potential risks, Unipetrol has introduced the “Product Stewardship – Product Supervision and Care,” which includes product testing, providing retail chains with information about the wide spectrum of product characteristic and adopting measures related to risk management wherever there are potential risks related to safety, health and the environment.

The group has introduced and maintained an integrated management system, which includes an occupational health and safety system, environmental management system and quality management system. Pursuant to the integrated management system, the Unipetrol Group undertook to fulfill with the following pledges:

## 2.1. Product supervision and care

- To develop, produce and distribute products with minimized risks of negative impacts on the health of people and the environment;
- To test product and to provide information to customers and the public, directly or via retail chains, about the wide spectrum of product characteristic and adopt measures related to risk management wherever there are potential risks related to safety, health and the environment;

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

- To comply with the appropriate legal and other binding requirements in the area of occupational health and safety, protection of the environment and quality of products and services;
- To introduce the best available technologies wherever it is suitable and effective;

## 2.3. Integrated management system

- To regularly examine suitability and adequacy of the integrated management system policies;
- To monitor, measure and assess individual processes and measures with the objective to achieve permanent improvement of the efficiency of the integrated management system;
- To record discrepancies and analyze causes of the process discrepancies and to adopt appropriate corrective and preventive measures to eliminate them;
- To continuously improve performance in the area of occupational health and safety, protection of the environment and quality management of products and services;
- To include legal and physical supplier entities in the management system, to acquaint them with the principles and procedures used in the company and to demand their fulfillment;
- To secure sources that are necessary for enforcing and maintaining the integrated management system and for financing activities in the areas, to which the system applies;

## 2.4. Preventive approach

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

## 2.5. Limiting risks related to safety, health and the environment

- To enforce the prevention and risk management system with regard to health, safety and the environment and with the objective to minimize negative impacts of such risks and accidents, and to compensate for damages caused by such accidents related to health, the environment and properties;
- To inform the public about the corresponding health, safety and environmental risks and about the adopted safety and preventive measures;
- To continuously identify dangers, to assess risks and health and environmental consequences, to adopt and introduce measures or limitations with the objective to eliminate them, to minimize negative impacts of arisen emergency situations;
- To educate employees on the prevention of negative impacts of their activities on their health, work safety and the environment, production quality and properties;

## 2.6. Open approach

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

## 2.7. Assessing impacts on safety, health and the environment

- To assess impacts on health, safety and the environment prior to the commencement of new activities, a new project or changes or prior to closing an operation, and to apply the corresponding assessment results in a way that reduces the negative impacts as much as possible;

## 2.8. Logistic and transport services

- To provide logistic and transport services and, while doing so, to maintain high safety standards, quality and environmental performance; to introduce and maintain the European "Safety & Quality Assessment System – SQAS" for the transport services, and assessments for cleaning the transport devices – the European Cleaning Document (ECD);

## 2.9. Remedy of old environmental burdens

- To implement a long-term program for remediation of old environmental burdens;

## 2.10. Customer orientation

- To maintain a high quality of individual products and services in an efficient way, if possible, and to adjust product specifications to given customer requirements;
- To monitor information related to customer perception, i.e. if their requirements are fulfilled. To fulfill their needs and expectations, including requirements of other involved parties (suppliers, employees and owners) with the objective to satisfy them and to gain a competitive edge;

## 2.11. Employee training and education

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

## 2.12. Protecting company assets

- To maintain and protect company assets. To reasonably insure risks, which cannot be completely eliminated, with the objective to reduce their negative impact on the company assets.

# III. Activities of the Unipetrol Group in The Area of Environmental Protection in 2012

## 3.1. Environmental investments

Environmental investments are defined as investment projects directly resulting from the requirements of legal regulations related to the protection of the environment. They are closely related to the enforcement of the integrated pollution prevention. Environmental investments can also include investment projects with a significant positive impact on the environment.

In 2012, the following important environmental investments were implemented within the group:

### Česká rafinérská

In 2012, the implemented investment projects in the area of the protection of the environment amounted to a total of 127 million CZK. They especially included the following:

- Reconstruction of the water treatment plant in Kralupy – in 2012, works on the water treatment plant in Kralupy continued. The reconstruction is required as a part of the valid IPPC. The project is in the stage of project documentation preparation and is being prepared in a way that will secure that the plant complies with the requirements for the best available technologies (BAT). The project should be completed by the end of 2015.
- Reconstruction of the sewerage system in Kralupy – two projects for the reconstruction of the existing sewerage system were prepared. The parts of the sewerage system with possible occurrence of MTBE were selected as preferential and solved first. This project has been implemented and completed. The second project, which addresses reconstruction of the remaining part of the sewerage system is in the stage of project documentation preparation. The project should be completed in 2015.
- Extension of the hydraulic protection system of underground water – the project addresses an extension of the hydraulic protection system of underground water at the Kralupy refinery in its northwest part, making sure that it is able to provide protection against penetration of substances dissolved in water. As a part of the 1<sup>st</sup> stage of the project, a system consisting of a catchment drain, sub-horizontal bores and absorption structures in the so-called green belt and at the northeast border of the city of Veltrusy was installed. The 2<sup>nd</sup> stage of the project, i.e. adopting certain measures in block 37, will be implemented during 2013.
- Preparation of the project for treating a part of the drawn underground water at the Kralupy refinery continued. The project is related to the extension of the hydraulic barrier.
- A project for improving reliability of the hydraulic barrier devices was implemented.
- The flare system at the Litvínov refinery was modified with the objective to eliminate potential safety risks.
- Preparation of the project for installing continuous analyzers at the sulphur production facility in Kralupy continued. The project should be implemented during the planned shutdown in 2013.
- The project for modernizing the railway filling ramp in Kralupy was implemented.
- The project for modifying the burners of the atmospheric distillation furnaces at the Kralupy refinery commenced.

### Unipetrol RPA

In 2012, the implemented investment projects in the area of the protection of the environment amounted to a total of 61.9 million CZK. They especially included the following:

- Completion of the following constructions: SO 04, Gravitation sewer for final treatment, SO 05, Reconstruction of mechanical pre-treatment, SO 01, sewerage system connections for separating sewer water – block 28 connection part. These structures were implemented as a part of the “Segregation of sewer water” project.
- Securing impermeability of the risk-prone industrial sewerage systems, handling areas and reservoirs at locations where hazardous or extremely hazardous substances are caught and stored pursuant to the Water Act at the T200 production facilities, mazut gassing facility and Water Management unit – waste water section.



- Commencement of the necessary proceedings on environmental impact assessment (EIA) for the intention to build a new Polyethylene 3 production facility.
- Sewerage system reconstruction, including the shafts in the area of the Ethylene unit.
- Installation of a camera system for the unified sewerage system and reverse flow for a faster detection of emergency leaks of harmful substances.
- Building a stable emergency profile on the Bílina River for efficient catchment of emergency leaks of harmful substances to the Bílina River.
- General study of the sewerage system on the premises of the Záluží Chempark with the objective to identify the sources of ballast water and pollution leaks to the unified sewerage system.
- As a part of monitoring emissions, a new measuring system was installed at the ethylene unit for determining the volume of the heating oil in 4 own sources of CO<sub>2</sub> emissions. 3 new measuring devices were installed at the emission gassing production facility for determining the volumes of CO<sub>2</sub>, one for the discharging CO<sub>2</sub> in the air and two for CO<sub>2</sub> deliveries to the consumers at the Záluží Chempark.

Several other measures with a positive impact on the environment were adopted as a part of operational expenses related to device maintenance procedures. These measures include repairs of sewerage systems, handling areas and reservoirs.

### Paramo

In 2012, the implemented investment projects in the area of the protection of the environment amounted to a total of 17.5 million CZK. They included the following:

- Commencement of the reconstruction of reservoir R 622, where raw materials for selective purification are stored.
- Completion of the "Reconstruction of storage reservoirs, including implementation of catchment reservoir PS 0404" investment project at the center in Kolín, co-financed from the Environmental operational program.

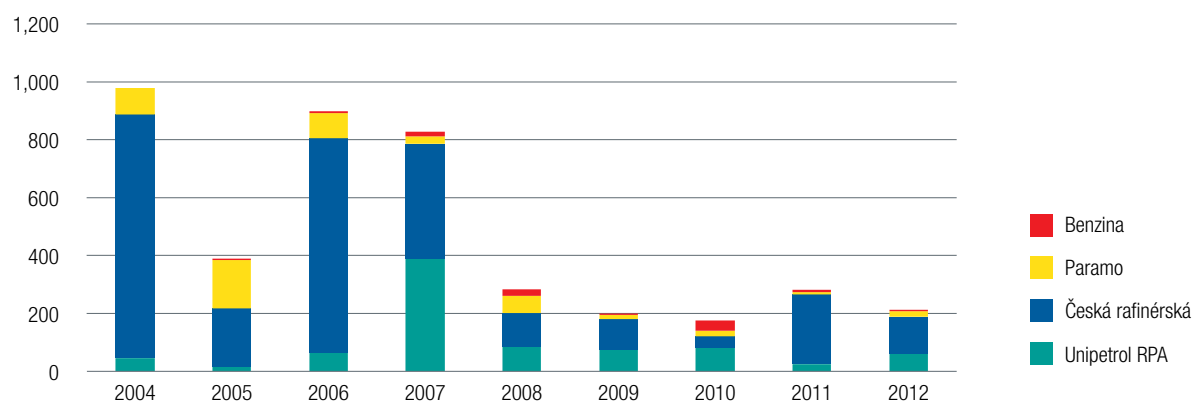
### Benzina

In 2012, the implemented investment projects in the area of the protection of the environment amounted to a total of 6.0 million CZK. They especially included the following:

- Replacement of the outdated water treatment plants of the washing lines at the following gas stations: Valašské Klobouky, Žďár nad Sázavou, Krnov, Litvínov-Záluží, Brno-Hněvkovského H.Počernice-Boleslavská, and sewer water at the gas station in Drslavice + installation of a new waste water treatment plant at the gas station in Mitrovice.
- Connecting waste water lines to the public sewerage system at the following gas stations: Sedlčany, Přelouč, Jičín-Robousy + preparing project documentation PD for 2 other gas stations.
- Building a new source of drinking water at the gas station in Olomouc-Žerůvky + connection for the gas station in Frymburk.
- Installation of plastic inserts to fuel tanks at the Lovosice and Suchdol nad Lužnicí gas stations.
- Replacing the insufficient sorption inlets at the gas station in Blovice by a new ORL + handling area.
- Changing the waste water liquidation manner to an absorption process at the gas station in Nymburk.

### Investment expenses related to the protection of the environment throughout the group (millions CZK/year)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	46	17	65	389	85	76	81	25	62
Česká rafinérská	841	200	740	397	116	105	40	241	127
Paramo	92	168	87	26	59	14	20	7	18
Benzina	1	5	6	16	22	5	35	8	6
<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>	<b>213</b>



## 3.2. Expenses related to the protection of the environment

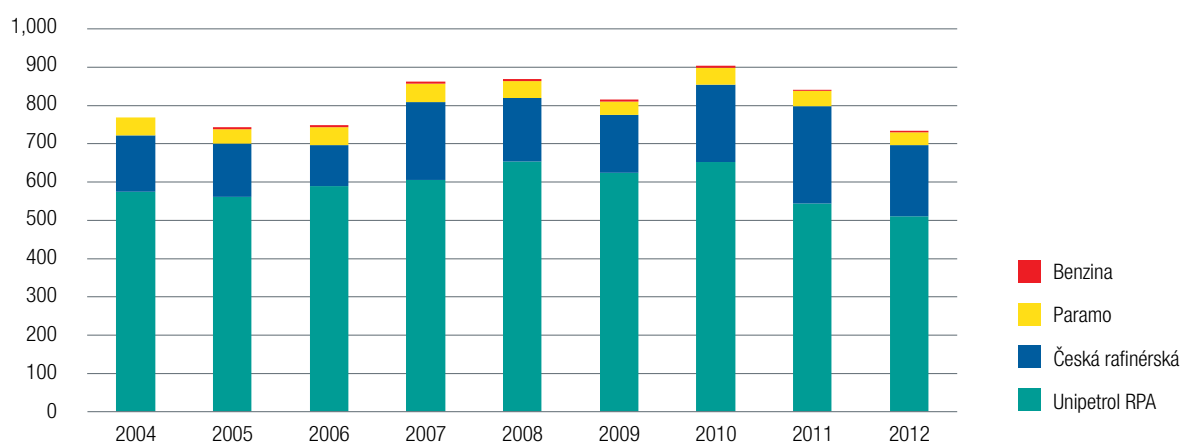
### Environmental operational expenses

Expenses related to the operation of air protection devices, waste water treatment, waste management, operation of environmental management systems, monitoring of substances released to the environment, environmental impact assessments (EIA process), integrated pollution prevention and other related environmental activities are considered environmental operational expenses.

Newly installed modern technologies with a high degree of raw material conversion, reduced volume of waste and high energy efficiency led to an overall reduction of the environmental operational expenses in comparison with the previous decade. Recently, the amount of the environmental operational expenses has been, more or less, stable. The development of the environmental operational expenses between 2004 and 2012 is showed in the following summary.

### Operational expenses related to the protection of the environment in the group (millions CZK/year)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	575	561	590	606	654	624	652	544	511
Česká rafinérská	147	139	106	203	166	144	202	254	185
Paramo	47	38	47	48	44	35	44	40	34
Benzina	-	5	5	5	5	5	6	3	4
<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>	<b>734</b>

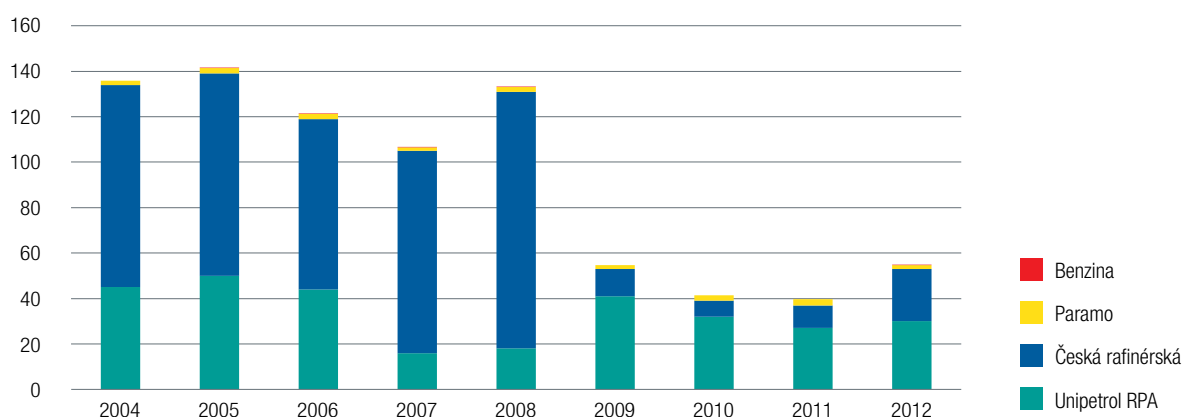


### Total expenses related to the protection of the environment

The total expenses related to the protection of the environment in the Unipetrol Group include the cost of environmental investments, operational expenses for the protection of the environment, expenses related to the rehabilitation of old environmental damages and fees for air pollution, discharging waste water, depositing waste at dump sites, and compensations for emission-related damages of forests. The development of fees and payments for polluting the environment and the total expenses related to the protection of the environment between 2004 and 2012 is showed in the following summary. The drop in the fees and payments in 2009 in comparison with 2008 in the case of Česká rafinérská was caused by a methodology change.

**Fees and payments for polluting the environment in the group (millions CZK/year)**

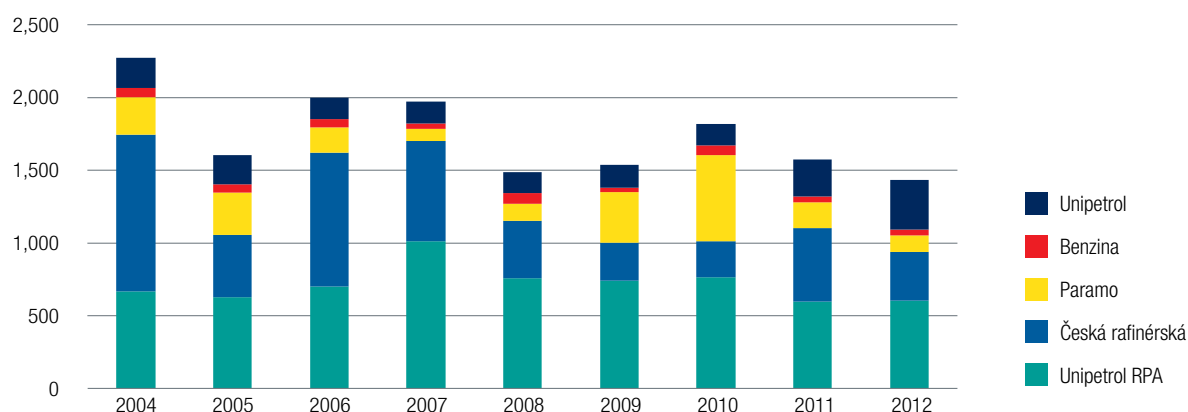
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	45	50	44	16	18	41	32	27	30
Česká rafinérská	89	89	75	89	113	12	7	10	23
Paramo	2	2	2	1	2	1.7	2.5	2.6	1.7
Benzina	-	0	0	0	0	0	0	0	0.2
<b>Unipetrol Group</b>	<b>136</b>	<b>141</b>	<b>121</b>	<b>106</b>	<b>133</b>	<b>55</b>	<b>41</b>	<b>40</b>	<b>55</b>



In 2012, the total expenses of the group, related to the protection of the environment, amounted to 1.4 billion Czech crowns. The growth of the total expenses in 2009 and 2010 in comparison with 2008 was especially caused by the commencement of new projects in the area of rehabilitation works at both locations of PARAMO, a.s. The decrease in 2011 was also significantly influenced by the rehabilitation works at both locations of PARAMO, a.s. The growth of expenses in the case of Česká rafinérská in 2011 was the result of an increased investment activity in the area of environmental projects. The annual decrease in the case of Paramo is related to the suspension of the rehabilitation works on the polluted soil from the former waste lagoons in HS Kolín.

**Total expenses for the protection of the environment in the group (millions CZK/year)**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	666	628	699	1011	757	741	764	596	603
Česká rafinérská	1,077	428	921	689	395	261	249	505	335
Paramo	260	291	176	85	119	346	591	179	114
Benzina	41	36	26	38	73	31	67	39	39
Unipetrol	206	202	147	148	144	159	148	256	343
<b>Unipetrol Group</b>	<b>2,250</b>	<b>1,585</b>	<b>1,969</b>	<b>1,971</b>	<b>1,488</b>	<b>1,538</b>	<b>1,820</b>	<b>1,576</b>	<b>1,434</b>



### 3.3. Management systems

Management systems form an important factor of the protection of the environment, occupational health and safety and fire protection. The companies of the Unipetrol Group have established certified environmental management systems (EMS), safety management systems (HSMS) and quality management systems (QMS) as a guarantee of a systematic approach to the protection of the environment and to other areas.

The systems have been certified pursuant to the following international standards: ISO 14001, OHSAS 18001 and ISO 9001.

In the 4<sup>th</sup> quarter of 2012, a supervisory IMS audit was conducted at Unipetrol, Unipetrol RPA, Unipetrol Doprava, Benzina and Unipetrol Services. The certification organization Lloyd's Register Quality Assurance confirmed conformity with the given system standards and validity of the issued certificates.

In the beginning of 2012, SGS Germany conducted a certification audit of the sustainability system of the production of motor fuels with bio-components (ISCC) at Unipetrol RPA.

Towards the end of 2012, Moody International conducted the "Safety and Quality Assessment Systems" (SQAS) certification audit, focused on the steaming station for tankers at Unipetrol Doprava.

In June 2012, a supervisory IMS audit was conducted at ČESKÁ RAFINERSKÁ, a.s. The audit was conducted by the certification organization Lloyd's Register Quality Assurance, which confirmed conformity with the given system standards and validity of the issued certificates.

In June 2012, a control certification audit took place in PARAMO, a.s. It included all three systems, EMS, HSMS and QMS. The integrated certificate issued in 2012 (Lloyd's Register Quality Assurance) is valid until 2015.

### 3.4. Responsible Care Program in chemistry

The Responsible Care Program is a voluntary, worldwide initiative of the chemical industry, focused on the support of its sustainable development by responsive improvements of the safety of its operated devices, product transport, protection of the health of the population and the environment. The program represents a long-term strategy, coordinated by the International Council of Chemical Associations (ICCA) and the European Chemical Industry Council in Europe (CEFIC). The contribution of the Responsible Care program to the sustainable development of the industry was awarded at the congress in Johannesburg by the UN Environmental Program award.

In 2005, the Responsible Care program was adopted as a continuation of the Global Charter of the Responsible Care program at the international conference on chemical substances under the patronage of the UN.

The national version of the Responsible Care program is represented by the Responsible Business in Chemistry program, announced in October 1994 by the Minister of Industry and Trade and 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 program and of the conditions of its fulfillment can be found on the information server of the Association of Chemical Industry of the Czech Republic at <http://www.schp.cz>.

PARAMO, a.s. has been repeatedly authorized to use the logo of the Responsible Care program based on its successful public defense in 2012. Other companies of the Unipetrol Group defended this authorization in 2011. Since ČESKÁ RAFINERSKÁ, a.s. is not a member of the Association of Chemical Industry of the Czech Republic, it does not use the authorization any more, even though it still complies with its principles.

## Certified/verified management systems in the Unipetrol Group in 2012

Company	Verifier	Certification pursuant to standard	Certification dates	Expected re-certification
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
Unipetrol RPA	SGS Germany	ISCC	2011, 2012	2013
Paramo	LRQA	ISO 14001	2003, 2006, 2009 2012	2015
Paramo	LRQA	ISO 9001	1996, 2000, 2003, 2006, 2009 2012	2015
Paramo	LRQA	OHSAS 18001	2007, 2009 2012	2015
Paramo	SCHP ČR	Responsible Care	2001, 2003, 2005, 2008 2012	2015
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	2015
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

# IV. Compliance with the Legal Regulations Related to the Protection of the Environment

## 4.1. Integrated pollution prevention

Individual 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 establishments of the chemical and refinery industry.

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

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. On July 20<sup>th</sup>, 2006, the Regional Authorities of the Ústí nad Labem Region adopted Change No. 1 of the integrated permit in relation to investments projects, subjects of which were tapping, storing and using LCO (light cycled oil from the Kralupy refinery) and tapping, storing and blending MEŘO (biofuel). On October 17<sup>th</sup>, 2006, the Regional Authorities of the Ústí nad Labem Region issued Change No. 2 of the integrated permit in relation to investments projects, subjects of which were revamp of the fission unit of the new hydrocrack and building a new re-contacting system at the visbreaking unit. On June 12<sup>th</sup>, 2007, Change No. 3 of the integrated permit was issued in relation to the investment projects for replacing the existing burners with low-emission burners at the furnaces of the new refinery, installing the pre-heating unit for combustion air, replacing the existing burners with low-emission burners at the gaseous oil hydrogenesis unit, intensifying the desulphurizing unit of rich gases and regenerating MEA. On May 5<sup>th</sup>, 2008, Change No. 4 of the integrated permit was issued in relation to the investment projects for the oxygen economy for enriching combustion air for the Claus units. On June 27<sup>th</sup>, 2008, Change No. 5 of the integrated permit was issued in relation to the investment projects for the construction of tapping facilities of light products. On June 8<sup>th</sup>, 2009, Change No. 6 of the integrated permit was issued in relation to the project for a change of the used fuel at the catalytic reforming furnaces. On March 28<sup>th</sup>, 2011, Change No. 7 of the integrated permit was issued in relation to the implementation of the investment projects for modifying the flare system of the refinery block and repairing the chimney lining of the Claus unit. Moreover, the corresponding conditions for discharging industrial waste water into the internal sewerage system were specified. Towards the end of 2011, applications for a change of the integrated permit in relation to the cancellation of the oil economy for the combustion of liquid fuels and repairs of the aggregates at the sulphur production facility were submitted. The corresponding Changes No. 8 and 9 of the integrated permit were issued on January 4<sup>th</sup> and February 28<sup>th</sup>, 2012.

The integrated permit for the Kralupy refinery was issued by the Regional Authorities for the Central Bohemian Region on February 4<sup>th</sup>, 2004. Because of mainly procedural mistakes during the proceedings for issuing the integrated permit by the approving authorities, the permit was later cancelled and on March 13<sup>th</sup>, 2008, the Regional Authorities for the Central Bohemian Region issued a new integrated permit, which covers all installations of the Kralupy refinery. On March 2<sup>nd</sup>, 2011, a change of the integrated permit was issued in relation to the installation of continuous analyzers at the output from the Claus unit and to the change of the deadline for completing the revamp of the water treatment plant. On May 24<sup>th</sup>, 2012, Change No. 2 of the integrated permit for the Kralupy refinery was issued. This change permitted modifications of the burners of the atmospheric distillation furnaces.

All production units of UNIPETROL RPA, s.r.o. have valid integrated permits issued by the Regional Authorities of the Ústí nad Labem Region. In relation to the implementation of individual investment projects, changes of technological devices, used substances, arisen waste substances or changes of legal regulations, these permits are continuously updated. During 2012, a total of 11 changes of the integrated permits for the company installations were issued.

The changes were related, for example, to the update of the categories of sources that pollute the air pursuant to the new Water Act, to the changes of the corresponding conditions for operating the sources pursuant to the new legislature, to the approval of operating regulations and emergency plans of individual production facilities, to the cancellation of the conditions for the protection of the air as a result of the shutdown of the source of the T200 thermal



power plant, to the reduction of emission ceilings for sulphur dioxide for 2012 at the sources of the T200 thermal power plant and the EJ Energy block, to the modification of the conditions for monitoring rain water, to the specification of the cleaning frequency for sand and oil catchers, to the determination of the deadline for cleaning the deposit reservoirs in front of the discharge structures of the waste water treatment plant, to the reduction of the annual limit for vanadium in waste water discharged from the biological treatment plant, and to the time limitation for the permit to discharge waste water from the waste water treatment plant in accordance with the new rules of the Water Act.

All technologies operated by PARAMO, a.s. have valid integrated permits. At HS Pardubice, integrated permits have been obtained for the operation of the Energy, Asphalt, Fuels and Oils facilities. These permits were issued by the Pardubice Regional Authorities. HS Kolín has acquired one integrated permit, issued by the Central Bohemian Regional Authorities. Pursuant to planned investments, partial terminations of some operations and legislative changes, these permits are continuously modified.

### Overview of the integrated permits for operations as of December 31<sup>st</sup>, 2012

Production unit	Integrated permit (issued by whom and when)
<b>Unipetrol RPA</b>	
Polypropylene and polyethylene production unit	Regional Authorities of the Ústí nad Labem Region; issued on 12/16/2003 for an indefinite period of time, 11 changes
Ethylene unit, including the naphthalene concentrate production unit	Regional Authorities of the Ústí nad Labem Region; issued on 2/21/2005 for an indefinite period of time, 8 changes
Urea production unit	Regional Authorities of the Ústí nad Labem Region; issued on 9/29/2005 s platností do roku 2017, 5 changes
Ammonia production unit	Regional Authorities of the Ústí nad Labem Region; issued on 6/12/2006 for an indefinite period of time, 5 changes
Mazut gassing production unit	Regional Authorities of the Ústí nad Labem Region; issued on 7/12/2006 for an indefinite period of time, 6 changes
T20 and T700 production units and the waste water and waste production unit	Regional Authorities of the Ústí nad Labem Region; issued on 10/11/2007 for an indefinite period of time, 15 changes
Dicyclopentadiene and non-hydrogenated C9 fraction production unit	Regional Authorities of the Ústí nad Labem Region; issued on 2/23/2009 for an indefinite period of time, without changes
<b>Česká rafinérská</b>	
Litvínov Refinery	
ČESKÁ RAFINÉRSKÁ, a.s., Litvínov refinery	Regional Authorities of the Ústí nad Labem Region; issued on 12/15/2003 for an indefinite period of time, 9 changes
Kralupy nad Vltavou refinery	
ČESKÁ RAFINÉRSKÁ, a.s., Litvínov Refinery	Regional Authorities of the Central Bohemian Region; issued on 3/13/2008 for an indefinite period of time with the exception of the part that specifies the conditions for discharging waste water, which is valid until 12/31/2015, 2 changes
<b>Paramo</b>	
Energy, Pardubice economic center	Regional Authorities of the Pardubice Region; issued on 2/2/2004 for an indefinite period of time 4 changes
Asphalt operation, Pardubice economic center	Regional Authorities of the Pardubice Region; issued on 10/2/2004 for an indefinite period of time, 5 changes
Fuels operation, Pardubice economic center	Regional Authorities of the Pardubice Region; issued on 12/7/2004 for an indefinite period of time, 5 changes
Kolín economic center	Regional Authorities of the Central Bohemian Region; issued on 5/31/2005 for an indefinite period of time, 7 changes
Oils operation, Pardubice economic center	Regional Authorities of the Pardubice Region; issued on 1/23/2006 for an indefinite period of time, 4 changes

### Integrated pollution register

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

The pollution registers (IRZ and E-PRTR) register emission data on 93 different substances released to the air, water and soil and on their transfer in waste and waste water, as well as transfers of hazardous and other waste, on behalf of individual companies and industry fields. The companies submit the data to IRZ and E-PRTR jointly by March 31<sup>st</sup> for the previous year via the Integrated system of the fulfillment of the reporting obligations (ISPOP). The data are consequently published on the IRZ server by September 30<sup>th</sup>. Pursuant to the requirements of the given legal regulations, the integrated pollution register (IRZ) is supplied with reports related to the substances, emissions of which have reached or exceeded the volumes specified as the threshold.

## 4.2. Protection of the air, discharging waste water, waste management

All companies of the group have complied with the requirements of the legal regulations related to the protection of the environment on a long-term basis. The air pollution sources are operated in compliance with the valid operating regulations. Authorized emission measurements have been conducted within the specified deadlines. All related facilities have approved water managements plans in place. The quality of waste water is monitored regularly. The emission limits related to pollutants in waste water are complied with. All facilities have approved waste management plans in place. Waste is monitored and recorded in compliance with the valid legislature.

Fulfillment of the appropriate legal regulations is monitored by the company management and group headquarters and independently verified by administration authorities, certification authorities and, in the case of companies that participate in the Responsible Care program, by the Association of Chemical Industry of the Czech Republic. Whenever there are any deviances from the requirements of the given legal standards, corrective measures are immediately adopted and, if applicable, corresponding penalties charged by the administration authorities.

### Discharging waste water

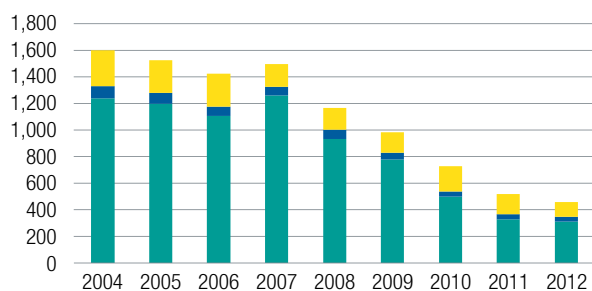
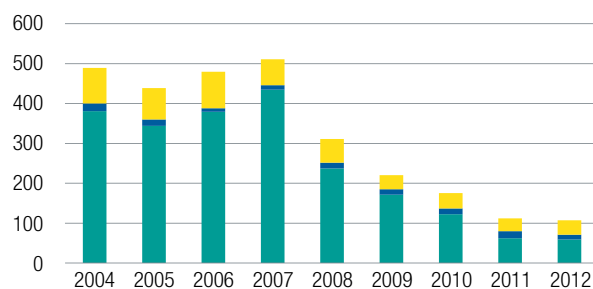
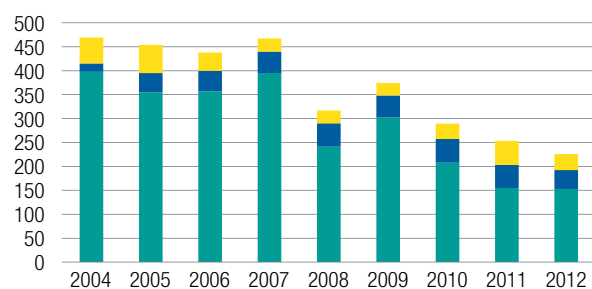
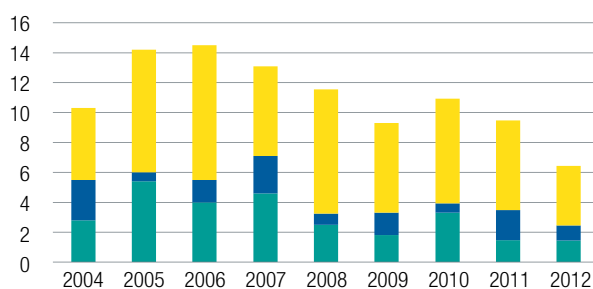
During the last five years, the emission of pollutants into the environment has been stabilized at a level, achieved by massive environmental investments, implemented during the last decade.

The volume of released pollutants in waste water has been continuously decreasing. The decrease is the result of several investment as well as non-investment measures, for example, by an extensive reconstruction of the biological waste water treatment plant of Unipetrol RPA during 2007–2009, by reconnecting municipal waste water to a newly built waste water treatment plant in 2010, by segregating industrial water from the unified sewerage system of industrial water into a separate industrial waste water sewerage system, and by several other measures.

**Pollution released in waste water in the group (t/year)**

Year	Parameter	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Unipetrol RPA</b>	COD	1,239	1,197	1,107	1,261	932	780	500	329	311
	BOD	381	344	379	435	237	171	122	62	59
	Insoluble substances	398	355	357	395	241	302	208	155	153
	Crude oil products	3	5	4	5	3	2	3	1	1
<b>Česká rafinérská<sup>1)</sup></b>	COD	92	83	69	66	71	49	37	37	37
	BOD	19	16	9	11	15	14	15	18	12
	Insoluble substances	17	40	43	45	49	46	49	48	39
	Crude oil products	3	1	2	3	1	2	1	2	1
<b>Paramo</b>	COD	269	245	248	171	163	154	192	153	111
	BOD	89	79	92	65	59	35	38	32	36
	Insoluble substances	54	59	38	27	27	26	32	50	34
	Crude oil products	5	8	9	6	8	6	7	6	4
<b>Unipetrol Group</b>	<b>COD</b>	<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>	<b>459</b>
	<b>BOD</b>	<b>489</b>	<b>439</b>	<b>480</b>	<b>511</b>	<b>311</b>	<b>220</b>	<b>175</b>	<b>112</b>	<b>107</b>
	<b>Insoluble substances</b>	<b>469</b>	<b>454</b>	<b>438</b>	<b>467</b>	<b>317</b>	<b>374</b>	<b>289</b>	<b>253</b>	<b>226</b>
	<b>Crude oil products</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>13</b>	<b>12</b>	<b>10</b>	<b>11</b>	<b>9</b>	<b>6</b>

<sup>1)</sup> Only the Kralupy location

**COD**

**BOD**

**insoluble substances**

**Crude oil products**


Paramo      Česká rafinérská      Unipetrol RPA

### Waste management

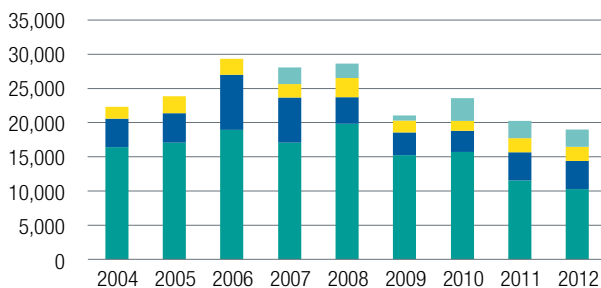
From a long-term perspective, the Unipetrol Group has achieved a radical reduction of the volume of total as well as hazardous waste. The waste volume for the period of 2004–2010 was, more or less, stable. Some fluctuations were caused by suspensions or by relatively extensive construction works. During 2010–2012, the production of waste in comparison with the previous years decreased, mainly due to the reduction of waste from demolition and construction works.

### Waste production in the group (t/year)

Year	Parameter	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	Total	16,411	17,061	18,963	17,065	19,818	15,261	15,693	11,563	10,290
	Hazardous (out of the total)	1,059	1,215	1,620	1,309	1,661	914	1,067	1,644	1,067
Česká rafinérská <sup>1)</sup>	Total	4,192	4,301	8,051	6,599	3,911	3,323	3,103	4,113	3,809
	Hazardous (out of the total)	1,895	2,628	2,253	1,932	1,985	1,663	1,078	1,936	1,534
Paramo	Total	1,718	2,507	2,310	1,983	2,821	1,723	1,449	2,048	2,280
	Hazardous (out of the total)	920	963	665	1,115	939	1,060	629	1,151	1,465
Unipetrol Doprava	Total		2,419	2,094	2,419	2,094	722	3,352	2,539	1,766
	Hazardous (out of the total)		527	214	527	214	344	393	906	400
Unipetrol Group	<b>Total</b>	<b>22,321</b>	<b>26,288</b>	<b>31,418</b>	<b>28,066</b>	<b>28,644</b>	<b>21,029</b>	<b>23,597</b>	<b>22,333</b>	<b>18,145</b>
	<b>Hazardous (out of the total)</b>	<b>3,874</b>	<b>5,333</b>	<b>4,752</b>	<b>4,883</b>	<b>4,799</b>	<b>3,981</b>	<b>3,167</b>	<b>5,632</b>	<b>4,466</b>

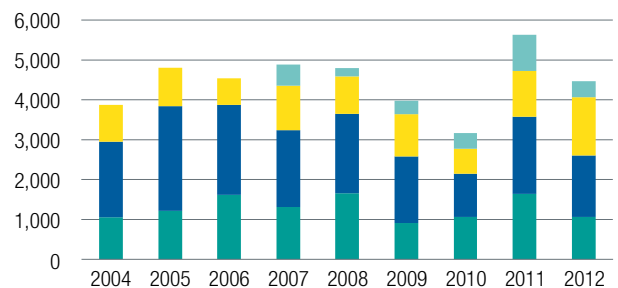
<sup>1)</sup> Including investment activities

### Total waste volume



■ Unipetrol RPA ■ Česká rafinérská ■ Unipetrol Doprava ■ Paramo

### Hazardous waste



### Air protection

In 2007, the annual volume of the sulphur dioxide emissions in Unipetrol RPA and in the Záluží part of Česká rafinérská increased in comparison to 2006. The increase was caused by a different manner of combustion of the gas products containing hydrogen sulphide from the mazut gassing production facility of Unipetrol RPA and by burning refinery surpluses of the gas products from the Záluží refinery, which could not have been processed on the desulphurizing unit of rich gases. The implementation of the "Modification of the desulphurizing unit of rich gases" project, which led to an increased capacity of the desulphurizing unit, and the "Construction of the re-contacting section of the Visbreaking unit" project (which allows for desulphurizing low-pressure gases from this unit), resulted in a situation when all gases are processed at the appropriate technological units without being combusted. In 2008, no gas products were subjected to combustion because of an insufficient capacity for their processing.

The increase of the emissions of sulphur dioxide as well as nitrogen oxides at the Litvínov refinery in 2009 was caused by a boiler defect at the Claus III unit. The pipes of the boiler had to be therefore replaced. During the repair, the sulphur dioxide gas, containing ammonia, emissions of which were recalculated to nitrogen oxides, was being combusted on a field burner. In 2010, the operation was stabilized and the emissions decreased. The increased SO<sub>2</sub> emissions in 2011 were the result of the combustion of a part of the sulphur dioxide gases during the repair of a device at the sulphur production facility at the Litvínov refinery. The increased SO<sub>2</sub> emissions in 2012 were the result of a lower efficiency of the device during the repair work conducted on the aggregates of the Claus 4 unit and the thermic incinerator.

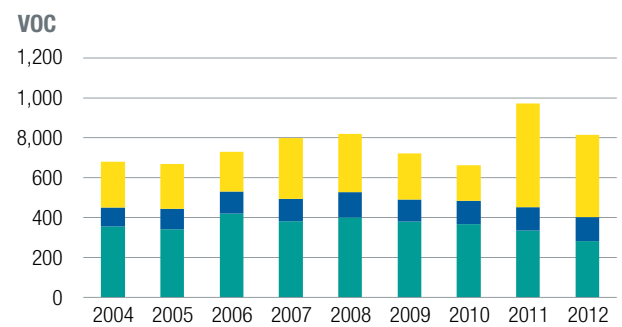
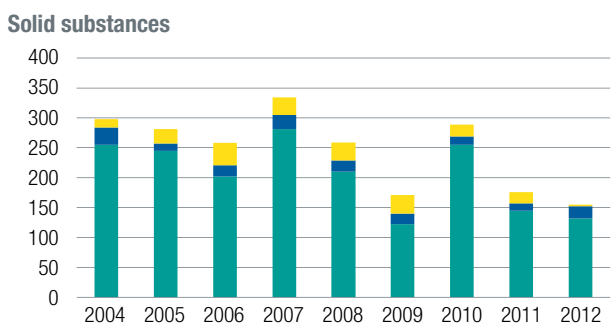
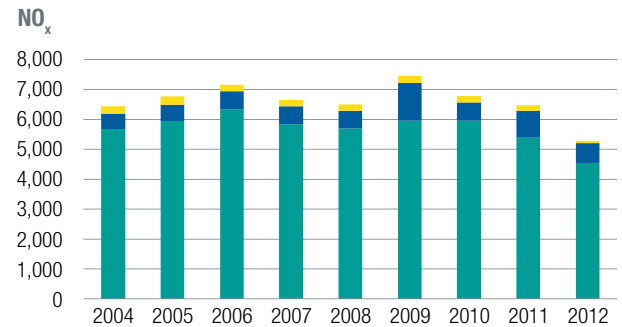
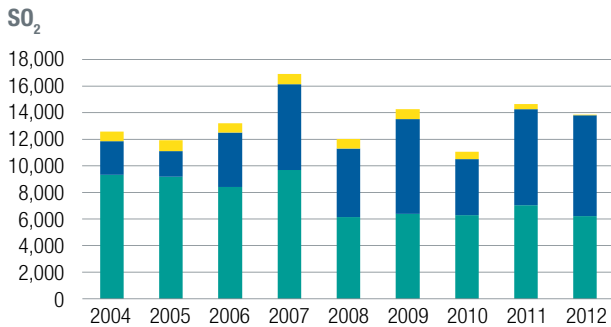
Since 2007, the overall volume of pollutants released to the air by Unipetrol RPA has been decreasing. The decrease is the result of a gradual shutdown of the outdated T200 power plant (completely put out of the operation in 2011) and of the optimization of the operation of the newer T700 power plant 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 prior to the production shutdown at the T200 power plant. The increase of the SO<sub>2</sub> emissions was caused by a high content of sulphur in raw materials – brown coal. All emissions decreased in 2012 due to a better desulphurizing process at T700.

Compared to the previous years, the primary combustion of natural gas at the boiler rooms of HS Pardubice and HS Kolín led to a reduction of the emissions of sulphur dioxide, solid pollutants and nitrogen oxides. The reduction of the overall emissions from combustion processes was achieved despite the extension of oil processing capacities at HS Kolín. The higher VOC emissions (fugitive emission of methyl ethyl ketone and toluene) are the result of the stated extension in 2011.

### Air pollution in the group (t/year)

Year	Parameter	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Unipetrol RPA</b>	SO <sub>2</sub>	9,334	9,197	8,409	9,691	6,143	6,397	6,290	7,039	6,235
	NO <sub>x</sub>	5,678	5,945	6,346	5,839	5,695	5,959	5,954	5,388	4,541
	Solid substances	255	245	202	281	210	122	255	145	132
	VOC	356	341	420	381	400	379	367	334	281
<b>Česká rafinérská <sup>1)</sup></b>	SO <sub>2</sub>	2,530	1,910	4,107	6,469	5,166	7,121	4,234	7,220	7,481
	NO <sub>x</sub>	518	545	593	604	567	1,259	612	906	665
	Solid substances	29	12	19	24	19	18	14	12	20
	VOC	94	103	110	113	127	111	117	118	121
<b>Paramo</b>	SO <sub>2</sub>	717	835	704	749	721	742	546	389	44
	NO <sub>x</sub>	244	276	213	208	212	239	219	175	74
	Solid substances	14	24	37	29	30	31	20	19	3
	VOC <sup>1)</sup>	230	225	200	304	293	231	178	520	413
<b>Unipetrol Group</b>	<b>SO<sub>2</sub></b>	<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>	<b>13,760</b>
	<b>NO<sub>x</sub></b>	<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>	<b>5,280</b>
	<b>Solid substances</b>	<b>298</b>	<b>281</b>	<b>258</b>	<b>334</b>	<b>259</b>	<b>171</b>	<b>289</b>	<b>176</b>	<b>155</b>
	<b>VOC</b>	<b>680</b>	<b>669</b>	<b>730</b>	<b>798</b>	<b>820</b>	<b>721</b>	<b>662</b>	<b>972</b>	<b>815</b>

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



■ Unipetrol RPA
 ■ Česká rafinérská
 ■ Paramo

### 4.3. Environmental Impact Assessment

As a part of the preparation of the revamp project of the waste water treatment plant at the Kralupy refinery, the Regional Authorities of the Central Bohemian Region asked ČESKÁ RAFINÉRSKÁ, a.s. to prepare and submit documentation for the given investigation proceedings. Based on the prepared documentation, the Regional Authorities of the Central Bohemian Region reached a conclusion that the intention will not be assessed pursuant to Act No.100/2001 Coll., on Environmental Impact Assessment.

In relation to the plan for building a new PE 3 polyethylene production unit at UNIPETROL RPA, s.r.o., the corresponding documentation for the investigation proceedings was prepared in 2012. Based on the evaluated documentation and objections from the Ministry of the Environment, it was decided to assess the intention in accordance with Act No. 100/2001 Coll., on Environmental Impact Assessment. The process will continue in 2013. The new PE 3 production unit should eventually replace the existing PE 1 production unit.

No environmental impact assessment (EIA) procedures took place in the remaining companies of the group in 2012.



#### 4.4. Sanctions for breaching the requirements of the legal regulations related to the environment

Our thorough effort to comply with the regulations related to the protection of the environment is also demonstrated by a small number of partial breaches of the requirements of the given environmental legal regulations. These breaches occurred due to non-standard operational situations during the last five years, i.e. between 2008 and 2012. During this period, the companies of the group received a total of 12 penalties and only 3 of them were considered more serious breaches of the obligations related to water protection, amount of which exceeded 100,000 Czech crowns.

##### Overview of the penalties received for breaching obligations related to the protection of the environment from 2008 until 2012

Company	Year	Reason of the sanction	Sanction amount (thousands CZK)	Note
Unipetrol RPA	2010	Breach of the obligations related to handling harmful substances (PyBi leak into a river)	1,750	Paid, no appeal
Unipetrol RPA	2011	Exceeding the "m" limit of the AOX in discharged waste water for 2010	120	Paid, no appeal
Česká rafinérská	2009	Breach of the legal regulations related to waste evidence	30	Paid, no appeal
Česká rafinérská	2009	Breach of the stipulations of the Water Act	323.9	Appealed to the Regional Authorities; the appeal body confirmed the penalty; paid
Česká rafinérská	2012	Breach of the stipulations of the Water Act	–	Administrative proceedings commenced; it will be completed in 2013.
Paramo	2008	Breach of the IP conditions (technical condition of the reservoir at the fat collection facility)	41	Our appeal to the Ministry of the Environment was unsuccessful
Paramo	2008	Breach of the legal regulations related to waste evidence	31	Appeal – penalty confirmed and paid
Paramo	2010	Incorrect marking of the Mogul Traktol Utto product	30	Paid
Paramo	2010	Exceeding the noise level on the border with a residential area	12	Paid
Paramo	2011	Incorrect marking of the retail package	31	Paid
Paramo	2011	Breach of the stipulations of the Water Act	6	Paid
Paramo	2012	Incorrect marking of the retail package	6	Paid

# V. Reducing Environmental and Operational Risks and Preventing Major Accidents

## 5.1. Prevention of major accidents

The companies of the group pay a great attention to the prevention of major accidents. The main condition of the accident prevention is a dependable and error-free operation of individual production facilities, which are designed, operated, inspected and maintained in compliance with the valid legislature of the Czech Republic and the appropriate 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 of the group.

Individual production facilities are equipped with control systems that monitor deviances from standard operational parameters. Some hazardous operations are equipped with automatic shutdown systems of individual operating units, which are activated upon exceeding the specified operational parameters. Pursuant to the type of the handled hazardous substances, individual production facilities are equipped with modern detection systems (detection of flames, smoke or leaks of hazardous substances) with their outputs at the appropriate control rooms and operational centers of the fire rescue unit of a given company. Stable and semi-stable fire extinguishing devices and fire monitors are installed at the given production facilities.

Internal audits of the safety and accident prevention are conducted at the companies of the group on a regular basis. Furthermore, regular external audits and inspections are conducted by the professional supervision bodies. These include, for example, the Czech Environmental Inspectorate, District Inspectorates of Labor, the Fire Rescue Unit, professional organizations in the Czech Republic, insurance brokers, insurers and foreign security providers. Recommendations and conclusions from these audits are incorporated into the appropriate implementation plans.

An important component of the prevention of major accidents is formed by regular training and lecturing of the employees. The functionality of the prevention system of major accidents is annually verified by practice drills of the solutions of accident and emergency situations in cooperation with the internal and external intervention units (at individual production facilities + accident practice drills conducted in cooperation with the companies that manage the given industrial premises or that conduct business in their close proximity).

A part of the risk management of major accidents is also formed by liability insurances pursuant to Act No. 59/2006 Coll.

The safety level at the companies of the group is significantly influenced by new investments into the production facilities. During their project preparation stages, possible operational risks are addressed by utilizing the generally accepted risk analyses related to serious accidents. New operations are always equipped with the most modern safety systems, known at the given moment, which comply with the appropriate regulations of the Czech Republic and the European Union.

All production companies of the group have their own fire rescue units, equipment and training of which are of a top-class, which allows for conducting highly specialized interventions in the case of accidents that involve leaks of hazardous substances.

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

In 2012, there was no accident at any of the companies of the Group, which would be subjected to reporting pursuant to Act No. 59/2006 Coll., on the Prevention of Major Accidents.

Emergency practice drills are organized at the companies of the Unipetrol Group pursuant to the given plans. Outputs from these practice drills have deepened the knowledge of all participating parties and assisted in locating deficiencies and adopting corrections, making them more efficient in the case of a real accident.

### Overview of the companies assigned to individual categories pursuant to Act No. 59/2006 Coll., as amended, and the status of the Safety Report as of December 31<sup>st</sup>, 2012

Company	Category	Safety report
UNIPETROL RPA, s.r.o.	B	3/1/2005 – 1 <sup>st</sup> BZ update approved (pursuant to Act No. 353/1999 Coll.) / Regional Authorities of the Ústí nad Labem Region 1/18/2008 – 2 <sup>nd</sup> BZ update approved (pursuant to Act No. 59/2006 Coll.) / Regional Authorities of the Ústí nad Labem Region
UNIPETROL DOPRAVA, s.r.o. - Operational section, Plant Pardubice, Semtín, Railway operation Pardubice	B	4/2/2008 – 1 <sup>st</sup> BZ update approved / Regional Authorities of the Pardubice Region, reference number 36470-16/2007/OŽPZ/BT
UNIPETROL DOPRAVA, s.r.o. - Operational section, Plant Pardubice, Semtín, Semtín siding	B	4/2/2008 – 1 <sup>st</sup> BZ update approved / Regional Authorities of the Pardubice Region, reference number 36472-18/2007/OŽPZ/BT
UNIPETROL DOPRAVA, s.r.o. - Operational section, Litvínov siding plant	B	8/7/2012 – 2 <sup>nd</sup> BZ issue approved / Regional Authorities of the Ústí nad Labem Region, reference number 2582/ZPZ/2011/H-20.3
UNIPETROL DOPRAVA, s.r.o. - Operational section, Plant Kralupy, Neratovice, Railway operation Neratovice	B	10/11/2012 – BZ update approved / Regional Authorities of the Central Bohemian Region, reference number 239899/2011/KUSK OŽP Bo
UNIPETROL DOPRAVA, s.r.o. – Operational section, Plant Kralupy, Neratovice, Railway operation Neratovice	B	12/5/2008 – BZ update approved / Regional Authorities of the Central Bohemian Region, reference number 119423/2007/KUSK OŽP Oh
ČESKÁ RAFINÉRSKÁ, a.s. Litvínov refinery	B	2/16/2003 – update approved / Regional Authorities of the Ústí nad Labem Region 6/3/2009 – update approved by the Regional Authorities of the Ústí nad Labem Region, reference number 23/09/ZPZ/H-02-2a/stát
Kralupy refinery	B	10/8/2002 – approved by the Mělník Distric Authorities 10/10/2008 – update approved by the Regional Authorities of the Central Bohemian Region, reference number 83689/2007KUSK OŽP
PARAMO, a.s., Pardubice economic center	B	8/3/2004 – Safety Report approved – Regional Authorities of the Pardubice Region 6/16/2005 – updated Safety Report approved 10/10/2008 – updated Safety Report approved 10/16/2009 – updated Safety Report approved The evaluation of the operator's Safety Report was prepared – approved on 3/8/2012 1/23/2013 – updated Safety Report approved
PARAMO, a.s., Kolín economic center	–	Not subject to the stipulations of Act No. 59/2006 Coll. Protocols on not being included pursuant to the above stated act updated and submitted to the appropriate regional authorities
BENZINA, s.r.o.	–	Not subject to the stipulations of Act No. 59/2006 Coll. Protocols on not including the gas station pursuant to the above stated act updated and submitted to the appropriate regional authorities.

## 5.2. Transport and information accident system TRINS

The Transport and information accident system (TRINS) is an assistance system for accidents related to the transport 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 between the association and the General Headquarters of the Fire Rescue Unit of the Czech Republic. The system was, as one of the support systems, incorporated into the Integrated Rescue System of the Czech Republic. Similar systems exist abroad, for example, the British CHEMSAFE or German TUIS, which was the model for creating TRINS. Similar systems were also established in Slovakia (DINS), Hungary (VERIK) and several other EU countries, where they have been in place for a long time.

The TRINS centers, in cooperation with the Fire Rescue Unit of the Czech Republic, provide the necessary, urgent work consultations related to the data on chemical substances and products, their safe transport and storage, practical experience with handling hazardous substances and liquidation of extraordinary events related to their transport. The TRINS centers also provide practical assistance for liquidating extraordinary events and consequent environmental damages.

Currently, there are 36 TRINS regional centers in the Czech Republic, provided by 24 companies from the area of chemical industry. The companies of the Unipetrol Group are the founding members of TRINS. Moreover, Unipetrol RPA is in the position of the national coordination center of the system.

### Overview of the participation in TRINS by the companies of the Unipetrol Group

Company	Participation in the "TRINS" accident system
UNIPETROL RPA, s.r.o.	National center, regional center
PARAMO, a.s.	Regional center (HS Kolín, HS Pardubice)
PETROTRANS, s.r.o.	Regional center
UNIPETROL SERVICES, s.r.o.	Representation of SChP of the Czech Republic - securing activities of the entire system, reporting and support of the national center at UNIPETROL RPA, s.r.o.

## 5.3. Major accidents in the Unipetrol Group in 2012

In 2012, no major accidents occurred in the companies of the Unipetrol Group pursuant to Act No. 59/2006 Coll. Small operational accidents, incurred during the year, were handled by internal means or by the means of the internal (company) fire rescue units. The situations were corrected and necessary measures adopted with the objective to prevent their reoccurrence. The impacts of the small operational accidents did not go beyond the premises of the companies of the group.

# VI. Open Approach to the Solutions of Issues Related to the Environment

## 6.1. Role of the employees in the process of protecting the environment

Company employees within the Unipetrol Group are considered 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 established an efficient training system of all employees. The training and education of the employees form a part of the established control systems and are subjected to regular reviews, assessments and amendments pursuant to standards ISO 9001, ISO 14001 and OHSAS 18001.

All employees are actively and permanently engaged in the creation and protection of the environment. At regular reconditioning training, they are being acquainted with the policies from the areas of the protection of the environment, occupational health and safety, fire protection, environmental aspects of their activities and the objectives and programs defined for their respective worksites.

Due training does not apply only to the company employees but also to the employees of external employees, who work at the given production facilities. The obligations related to the protection of the environment, occupational health and safety and fire protection form parts of the contracts concluded with individual contractors.

## 6.2. Communication with the public

Information openness is one of the principles of the "Responsible business policies in chemistry and the integrated control system of occupational health and safety, protection of the environment and quality" of the Unipetrol Group, as the basic concept document of the group.

Detailed information on the status and development of the impacts of the group activities on the environment are regularly published in the "Joint report on occupational health and safety and on the protection of the environment of the Unipetrol Group" (until 2006, the "Joint environmental report") and on the websites of the companies of the group.

Individual companies publicly discuss their reports on the fulfillment of the Responsible Care program with representative of the unions and local and regional governments. Websites of the companies of the Unipetrol Group always include summaries of activities from the areas of the protection of the environment and occupational health and safety.

The companies of the Unipetrol Group exercise the principles of social responsibility (CSR) towards the towns and communities in their surroundings. A part of the cooperation with the public is formed by providing information about the impacts the company has on the environment in its surroundings in the form of attending public meetings of the local governments of adjoining communities by representatives of the management of the companies of the Unipetrol Group. "Open Door Days" are organized for the public. Individual companies of the group organize regular meetings with the mayors of the given region's communities, participants of which are acquainted with all activities, including activities from the area of the protection of the environment. When non-standard operational situations occur, the mayors of the surrounding communities are preventively and immediately informed. For the needs of immediate communication with the public and with the company employees, companies use the so-called "green lines". Current information is available to the employees via the internal communication sources (radio, printed material, intranet).

Yet another example of the active information openness in the area of the protection of the environment is the activity of the Most Environmental Center, which has been in operation with the support of Unipetrol RPA and Česká rafinářská since 2000. The center significantly participates in the mutual dialogue in the area of the protection of the environment between individual industrial companies and the wide public and secures over-the-border communication with adjoining Saxony. In 2007, the Environmental Center in Kralupy nad Vltavou commenced its activities. The center conducts similar activities for the Kralupy Region.

In 2007, in cooperation with the Most Environmental Center, the project for preparing the "Chemistry and the Environment" training program was completed. The program focuses on education of elementary school pupils and high school students. The objective of the project was mainly the popularization of the protection of the environment issue in relation to chemical production, presentation of the positives and negatives related to chemical production and presentation of the activities of Unipetrol RPA in the area of the protection of the environment. Individual schools accepted the project very positively and that is why it continued in 2008. In 2011, in cooperation with the Most Environmental Center, the "Trip to the Secret of Crude Oil" interactive teaching program was prepared for the pupils of elementary schools and for high school students. 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, crude oil products and their impact on the environment. The information is designated for a wide public.

### Overview of company periodicals of individual companies of the Unipetrol Group, which bring regular information on the activities in the area of the environment

Company	Publication	Contact person
Unipetrol	UNI, newspaper of the employees of the Unipetrol Group	Martin Paviček 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 on occupational safety and on fire protection	Ing. František Hrobský, tel.: +420 476 164 883
Unipetrol Doprava	Company website	<a href="http://www.unipetrolodoprava.cz">http://www.unipetrolodoprava.cz</a>
Unipetrol Doprava	Information monthly on occupational safety and on fire protection	Ing. František Hrobský, tel.: +420 476 164 883
Česká rafinérská	RaCeK – newspaper of Česká rafinérská	Mgr. Simona Caidlerová, tel.: +420 315 718 579
Česká rafinérská	Impulse, magazine on occupational health and safety, fire protection, quality and the environment	Ing. Michal Šulc, tel.: +420 315 718 538
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>



# VII. Reducing Consequences of Old Environmental Burdens

## 7.1. Program for remediation of 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 the following contracts with the Ministry of Finances of the Czech Republic for solving environmental obligations arisen before the privatization (Environmental Contract):

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

## 7.2. Overview of old environmental burdens in the Unipetrol Group

In 2012, there were no changes recorded in the extent of old environmental burdens in comparison with the previous period. An overview of old environmental burdens of the Unipetrol Group is stated below.

### Unipetrol, Litvínov – industrial premises and other locations

#### Ethylene product pipeline between Litvínov and Kralupy nad Vltavou, locality Miletice u Velvar

- Polluted underground water and soil by ethylbenzene
- Rehabilitation work were completed, underground water is being monitored

#### Litvínov industrial premises and surrounding dump sites

- Dump sites of liquid sludge at Růžodol
  - Polluted by residues of tar and waste from crude oil refining
  - Waste has been removed from all dump sites
  - Construction of a sanitation drain commenced
- Fly ash dump sites K1-K4
  - Rehabilitation works at the K1 and K2 fly ash dump sites were completed
  - Documentation for issuing a building permit for the construction and operation of a hydraulic protection system at the K4 dump site was prepared and application for issuing the building permit was submitted
- Dump site of sludge from the waste water treatment plant
  - Rehabilitation works were completed
- Protection of the Bílina River in the area of the dump site of the sludge from the waste water treatment plant
  - Rehabilitation works were completed
- Catchment and separation drain
  - Rehabilitation works were completed
- Dump site of solid industrial waste, dump site of lime sludge II, dump site of lime sludge at the siding
  - Polluted by solid waste, crude oil products and lime sludge with phenols

- Coal-tar dump site
  - Polluted by coal soot, ashes, fly ashes, lime sludge and brown-coal tars
- Southern adjoining field of the ash dump sites
  - Polluted by fly ash and crude oil sludge, drawing contaminated water
  - Crude oil sludge was extracted and liquidated
- Remediation of underground water in contamination clouds on the premises
  - Polluted underground water by crude oil hydrocarbons and phenols
  - Construction of rehabilitation systems in contamination clouds No. 2, 5 and 13 took place
  - Remediation works in contamination clouds No. 3, 6 and 9 were completed
- Underground water monitoring
- Remediation of the soil on the premises within the frame of the environmental service during investment projects
  - Polluted soil by crude oil hydrocarbons and phenols

### **Unipetrol, Kralupy – industrial premises and other locations**

- Block 19 (tar)
  - Acidic residues from the gasoline refining process
  - Rehabilitation sustainability study of the “tar” location
  - The Czech Environmental Inspectorate issued a decision to rehabilitate the location
- Nelahozeves dump site
  - Styrene residues stored in steel barrels
  - Appendix to AAR prepared
  - The Czech Environmental Inspectorate issued a decision in relation to the deadline for the completion of the rehabilitation project and for conducting “pre-remediation monitoring”
  - “Pre-remediation monitoring” took place at the location
- Kralupy industrial premises
  - Contamination by refinery products and products from petrochemical production
  - The final draft of “Appendix 1 to the updated risk analysis of the Kralupy nad Vltavou industrial premises” was prepared
  - The system of Protective rehabilitation drawing of contamination cloud E was in operation

### **Benzina**

- Remediation of 58 contaminated areas of the gas stations
  - Contamination by motor fuels
- Remediation of 13 contaminated areas of former distribution warehouses of fuels
  - Contamination by motor fuels

### **Paramo, Pardubice**

- Časy dump site
- Dump sites Hlavečnick, Blato, Zdechovice and Nová Ves
- Main Paramo plant and its surroundings
- Dump site of acidic resin (location LIDL, ČSAD BUS)

### **Paramo, Kolín (former Koramo)**

- Remediation of the rock environment and underground water
- Liquidation of the disposal site of acidic resins (sludge lagoon)

### 7.3. Progress of the remediation works in 2012

#### As a part of removing old environmental burdens (OEZ), the following remediation works were executed in 2012:

##### Unipetrol, Litvínov:

- Remediation of underground water in the area of 5 contamination clouds took place on the premises of the plant; underground drains at the locations of 6 contamination clouds were drawn;
- Environmental service (supervision) – monitoring and bio-degradation of the soil were implemented as a part of 4 investment projects;
- Remediation of block 32 – contaminated material was extracted and liquidated at the dump sites; sanitation drains were being built;
- Liquidation of the lagoons at Růžodol – the area between the retention wall and the inlet structure of the drain of the Růžodol landfill was subjected to final cleaning; excavation works for the construction of the sanitation drain were executed;
- Activities for processing the updated risk analysis commenced;
- Ethylbenzene pipeline in Miletice – water monitoring pursuant to the new decision of the Czech Environmental Inspectorate was implemented.

##### Unipetrol, Kralupy:

- Protective extraction of contamination cloud E at blocks 14 and 15 is taking place;
- An application to decide about further operation of the protective remediation extraction of contamination cloud E was submitted to the Czech Environmental Inspectorate;
- 4 rounds of “pre-remediation” monitoring at the “Nelahozeves dump site” location took place.

##### Paramo, Pardubice:

- Post-remediation monitoring at the Blato locality is underway;
- Remediation extraction is underway, the project of the final stage of the remediation process at the Časy location is taking place;
- Post-remediation monitoring at the LIDL, ČSAD BUS locality is underway;
- Remediation intervention is taking place at the U Trojice location (reconstruction of the system of catchment bores J1, J2, J5, J6, J7, J8 and J9 was conducted – the bores were put into trial operation. Building permit was acquired for the construction of drain 1 and drain 2 and the corresponding documentation was prepared. The actual construction will be implemented during the first half of 2013);
- Zdechovice location: pursuant to the project, most waste and deposit site I was extracted. The extraction will be completed after concluding an amendment to the contract with the contractor. Biological remediation took place at deposit site II;
- An update of the remediation project of the main Pardubice plant was prepared and approved – negotiations with the Ministry of Finances about a tender for the contractor for a remediation intervention on the main premises of the Pardubice plant is expected in 2013;
- Remediation project for the Nová Ves deposit site was prepared and approved – Paramo asked for issuing a tender of a small extent for implementing the remediation intervention.

##### Paramo, Kolín:

- Remediation of the rock environment and underground water is underway.

##### Benzina:

- Maintenance remediation works (protective remediation extraction) took place at the Pardubice, Přelouč and Vysoké Mýto gas stations and at the Bartošovice, Jičín, Liberec, Nový Bohumín, Šumperk, Točnick and Žamberk distribution warehouses; remediation works at the following gas stations: Tachov, Polička, Mikulov and DS Havířov-Suchá (product pipeline).

#### Other remediation works conducted in 2012:

- Extracting and cleaning underground water, financed by Česká rafinérská on the Litvínov premises (2 pollution centers in the area of the warehouses and the terminal) and Kralupy premises (operating a hydraulic barrier),
- Extracting underground drain at the petrochemical facility on the Litvínov premises, financed by Unipetrol RPA.

## 7.4 Drawing financial resources in 2012

### Overview of financial guarantees of the Ministry of Finances of the Czech Republic and drawn finances in the Unipetrol Group (including VAT) as of December 31<sup>st</sup>, 2012

	Unipetrol Litvínov	Unipetrol Kralupy	Benzina	Paramo Pardubice	Paramo Kolín	Group total
Financial guarantees of the Ministry of Finances of the Czech Republic	6,012	4,244	1,349	1,242	1,907	<b>14,754</b>
Expenses covered by the Ministry of Finances of the Czech Republic in 2012	341	1	28	31	31	<b>432</b>
Cost of approved projects	4,688	50	473	540	1,859	<b>7,610</b>
Estimate of the gross cost of future projects	2,046	1,405	872	2,729	125	<b>7,177</b>
Total (expected) remediation cost	6,734	1,455	1,345	3,269	1,984	<b>14,787</b>
Balance of the financial guarantee from the Ministry of Finances of the Czech Republic	(722)	2,789	4	(2,027)	(77)	<b>(33)</b>

# VIII. Sustainable Development

## 8.1. Global aspects of the protection of the environment

### Regulation of the carbon dioxide emissions pursuant to the EU scheme for trading carbon dioxide emission permits (EU ETS).

Pursuant to Act No. 695/2004 Coll., on the Conditions for Trading Carbon Dioxide Emission Permits, and to the related Regulation of the European Parliament and Council No. 2003/87/ES, the government issued tradable carbon dioxide emission permits for selected companies in the form of Government Directive No. 315/2005 from July 20<sup>th</sup>, 2006, on the National Allocation Plan for 2005–2007.

For the 2008–2012 trading period, 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.

### Permit allocation for the companies of the Unipetrol Group in accordance with the National Allocation Plan for the periods of 2005–2007 and 2008–2012, and the real CO<sub>2</sub> emissions during 2005–2012.

Permit allocation Real emissions	(thousands of pieces/year)	Unipetrol RPA	Česká rafinérská	Paramo	Unipetrol Group
<b>Allocation pursuant to the NAP</b>					
<b>2005–2007</b>		<b>3,495</b>	<b>1,100</b>	<b>270</b>	<b>4,865</b>
2005: real emissions CO <sub>2</sub>		3,071	803	194	4,068
2006: real emissions CO <sub>2</sub>		3,092	910	196	4,198
2007: real emissions CO <sub>2</sub>		2,889	904	191	3,984
<b>Allocation dle NAP 2008–2012</b>		<b>3,121</b>	<b>867</b>	<b>199</b>	<b>4,187</b>
2008: real emissions CO <sub>2</sub>		2,762	910	176	3,848
2009: real emissions CO <sub>2</sub>		2,558	806	172	3,536
2010: real emissions CO <sub>2</sub>		2,468	883	170	3,521
2011: real emissions CO <sub>2</sub>		2,136	830	148	3,114
2012: real emissions CO <sub>2</sub>		1,944	857	95	2,896

The permits allocated to the companies of the Unipetrol Group covered the needs of the companies and real emissions during the first trading period of 2005–2007 as well as during 2008–2012 of the second trading period. Surpluses of the permits have been or will be traded.

The companies of the group fulfilled all requirements of Act No. 695/2004 Coll. and its implementation regulations. They prepared monitoring plans and, via a professionally qualified, independent party, complied with the obligation to verify the reported emissions.

In 2011, all companies of the Unipetrol Group were preparing for the implementation of the Regulation of the European Parliament and Council 2009/29/EC. They participated in the creation process of the amendment to the Act on the Conditions for Trading Carbon Dioxide Emission Permits. Moreover, they submitted completed applications for a free allocation of the permits for the period of 2013–2020 to the Ministry of the Environment. The applications were prepared based on the methodology issued by the European Committee, using benchmark values for individual activity types. By the end of 2012, the European Committee had still not published the final volume of the allocation. In 2012, pursuant to Act No. 383/2012 Coll. and the EU Committee Directive No. 601/2012, the companies of the Unipetrol Group prepared new monitoring and green house gas emission reporting plans and submitted them to the Ministry of the Environment.

### Protection of the Earth's ozone layer

All companies of the group operate their respective production devices in compliance with the requirements related to the protection of the Earth's ozone layer and in compliance with the valid international agreements. Česká rafinérská switched from the use of halogen hydrocarbons in its fire protection system to an environmentally more friendly solution already in 1999. Chemopetrol (today's Unipetrol RPA) replaced its cooling media in the low-temperature petrochemical operations by environmentally more friendly media already several years ago.

## 8.2. Chemical safety

All companies of the group handle chemical substances and chemical mixtures (preparations) in compliance with the valid Act on Chemical Substances and Chemical Preparations and in compliance with European Parliament and EU Council Directive No. 1907/2006 (REACH).

The companies of the group classify all their chemical products, which they introduce on the market. Moreover, based on the characteristics of the given products, they prepare material safety data sheets for them, format and content of which complies with the requirements of Appendix II of the REACH Directive. The material safety data sheets are provided for free to all consumers and, at the same time, they are placed on the websites of the companies. Pursuant to the REACH Directive, Unipetrol RPA makes the material safety data sheets of the produced and purchased hazardous chemical substances and mixtures (preparations) available to all employees via the INTRANET computer network. ČESKÁ RAFINÉRSKÁ, a.s. makes its material safety data sheets of the produced products available on the company intranet network; moreover, the company operates an extranet portal for its processors and shareholders, on which the material safety data sheets are available in three languages.

All companies of the group continuously monitor handling of the chemical substances and mixtures (preparations), from raw materials to final products, and secure compliance with the applicable valid legal regulations, including the acquisition of certificates for specific applications of selected products – for example, the certificate on health harmlessness for contact with food and drinking water, medicinal use, etc. The companies offer customer service, which provides detailed information on the given product characteristics in relation to its particular use.

The companies of the group are subject to the UN-OPCW international inspection, which focuses on inspecting compliance with the obligations arising from the "Convention on Prohibition of Chemical Weapons". All of the international inspections conducted at the companies of the group have demonstrated a thorough compliance with the obligations of the "Convention".

### Complying with the obligations pursuant to Directive of the European Parliament and EU Council No. 1907/2006 (REACH)

Pursuant to Directive of the European Parliament and EU Council No. 1907/2006 on Registering, Assessing, Permitting and Limiting Chemical Substances (REACH), the companies of the Unipetrol Group, which produce or import chemical products, are obliged to register all substances, which are present in the products. Out of the original 152 pre-registered substances, the companies eventually submitted 63 registration applications to the ECHA Agency.

The registration process was followed by the evaluation process of the compliance and completeness of the submitted registration documentations. If discrepancies with the requirements of the REACH Directive or insufficient quality of the verified data is determined, the ECHA Agency orders that the given data have to be corrected. In 2012, the companies of the Unipetrol Group had to update 18 of their registration documentations. In one of the cases, tests had to be added, which demonstrated that the given solid product is not being introduced on the market as a nanomaterial. Other cases were related to substances, which were registered as isolated semi-finished products, and registration documentations of which were submitted to a data analysis on the use of semi-finished products using an automated screening of the submitted documentation by the ECHA Agency. The result of the analysis was that more than one fifth of the assessed documentations included data, which question the chemical transformation of the semi-finished product during its processing to a different substance. The ECHA Agency asked the registrants to state more detailed specification and to update the registration documentations. The agency will continue with the same type, or even more extensive type of screening on a regular basis.

Pursuant to the valid legislature, Paramo has registered the necessary substances and isolated semi-finished products. At the same time, the corresponding material safety data sheets are being amended and, for the products classified as hazardous, the material safety data sheets are being complemented by exposition scenarios. The implementation team is still intensely engaged in communicating with the entire supplier chain and in updating the corresponding material safety data sheets. The implementation team has prepared registration of one substance with a production volume of 1,000 tons a year.

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

In 2010, Directive of the European Parliament and EU Council No. 1272/2008 on Classifying, Marking and Packaging Substances and Mixtures (CLP) became effective. The directive contributes to the global harmonization process of the criteria for classifying and marking with the objective to make the worldwide trading with chemical products easier.

Apart from classifying substances pursuant to the new rules, the companies of the Unipetrol Group had to also comply with the obligation to notify substances, which they intend to register in the 2<sup>nd</sup> and 3<sup>rd</sup> registration wave, and substances that are subject to the exception from the registration obligation and that the companies introduce on the market. As a part of the notification process, the notifying entities had to communicate to the ECHA Agency the identification data of the substances and the information about their classification, prepared based on CLP. Based on the received notifications, the ECHA Agency will publish a list of the classifications of the substances on its website and will attempt to create a platform, which should make the communication between the notifying entities and the agency easier with the objective to negotiate a unified classification for every single substance that is subject to the notification process.

### **Material safety data sheets**

Based on the data on the substances that are included in the submitted registration documentations, new material safety data sheets were prepared for products, which the companies of the Unipetrol Group introduce to the market. These material safety data sheets obligatorily include not only given classifications of the substances pursuant to the DSD/DPD system, but also the new classification pursuant to the CLP directive. The material safety data sheets also have to include corresponding exposition scenarios. This represents a brand new document format, which includes description of the recommended operational conditions and a list of risk management measures for the production as well as all identified usage manners of the given product. Compliance with the described measures will result in eliminating or minimizing the risks that could endanger the health of people and the environment, which were identified during the chemical safety assessment process and the process for determining the risks of the given substance within the frame of preparing its registration documentation.

## **8.3. Management of the primary raw materials and energy resources**

In the area of the primary raw materials and energy resources, the Unipetrol Group bases its policies on the principles of permanently sustainable development. The group focuses on the basic strategy related to innovative procedures, which lead to minimization of energy and material inputs. The group promotes continuous improvements of its environmental performance. Energy audits with the objective to achieve further energy savings were conducted in the companies of the group.

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

In 2006, Česká rafinérská commenced projects under the joint name of "Biofuels". This program strives to achieve a more economical use of non renewable resources by adding some agricultural products that originate from renewable resources into motor fuels. The Biofuels program has been implemented with the objective to secure the logistics, acceptance, storage and adding of bio-components and the storage and release of biofuels. Both refineries of the company now produce gasoline and motor diesel with added biofuels in compliance with the requirements of the given legislature and requirements of individual processors.

Česká rafinérská has implemented a reconstruction project of the air pre-heating processes at its Litvínov refinery on its atmospheric-vacuum distillation unit and hydrogenation chamber 5/6, which resulted in an increase of the furnace efficiency and reduction of the fuel consumption. As a result, the cost for heating individual pipe branches was also reduced. Compliance with the operational parameters defined for individual operational units for the purpose of optimizing the consumption of energies and utilities was verified as a part of the production control process in both refineries. For the period of 2013–2017, investment projects for both refineries are being prepared. They focus on device adjustments that will lead to a reduction of the heating gas consumption.

Individual measures at Unipetrol RPA are adopted based on the results of the energy audit, conducted in 2000. Various investment projects are being implemented continuously. They are supposed to, directly or indirectly, reduce the consumption of energies and raw materials and the production of waste and waste water. Moreover, they are supposed to allow for further use of auxiliary products or raw materials etc. for the devices of the given operator.

The Unipetrol Group pays constant attention to water savings issues. It was especially Paramo, which has achieved significant results in this area due to, especially, the implementation of enclosed cooling circulation circuits. The newly introduced chemical treatment of cooling water at Paramo reduces the volume of deposits and thus the volume of the consumption of additional water.

In the area of reducing energy consumption, Paramo implemented the following three projects: installation of two additional HOSD exchangers led to a significant reduction of the consumption of natural gas for heating of the hydrogenation furnaces; a measure was adopted that allows for utilizing high-pressure gas products at HOSD; a pilot steam cooling project was implemented for the selective refining operation.

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

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	24.2	22.5	23.7	22.2	24.5	23.0	22.0	20.0	19.4
Česká rafinářská	1.4	0.8	2.0	1.7	1.8	1.8	2.9	2.7	2.8
Paramo	1.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7
<b>Unipetrol Group</b>	<b>27.2</b>	<b>24.3</b>	<b>26.7</b>	<b>24.9</b>	<b>27.3</b>	<b>25.8</b>	<b>25.8</b>	<b>23.7</b>	<b>22.9</b>

Stabilized energy consumption in the Unipetrol Group is accompanied by a significant growth of the production volume. The development of energy efficiency of individual production processes is thus better demonstrated in the following table of the specific energy consumption, expressed by the energy consumption coefficient in tons of the crude oil equivalent (TOE), applied to the number of produced tons a year:

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

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	6.0	5.1	5.6	5.3	4.8	9.8	10.1	9.4	9.9
Česká rafinářská	12.0	13.8	15.1	13.6	16.8	16.6	14.6	12.6	13.7
Paramo	0.8	1.0	2.8	2.7	2.7	2.6	2.4	2.9	1.8
<b>Unipetrol Group</b>	<b>18.8</b>	<b>19.9</b>	<b>23.5</b>	<b>21.6</b>	<b>24.3</b>	<b>29.0</b>	<b>27.0</b>	<b>24.9</b>	<b>25.4</b>

Note: Data from Paramo in 2004 and 2005, excluding the former Koramo

### Specific energy consumption in the group (TOE/t production a year)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	0.171	0.166	0.184	0.159	0.153	0.163	0.163	0.166	0.163
Česká rafinářská Litvínov	0.038	0.037	0.038	0.035	0.032	0.034	0.049	0.053	0.043
Česká rafinářská Kralupy	0.051	0.053	0.056	0.056	0.057	0.053	0.058	0.056	0.057
Paramo HS Pardubice	0.079	0.093	0.096	0.087	0.086	0.097	0.106	0.115	0.151 <sup>*)</sup>
Paramo HS Kolín	0.384	0.227	0.303	0.297	0.221	0.355	0.333	0.245	0.221

<sup>\*)</sup> During the 2<sup>nd</sup> quarter of 2012, crude oil processing was terminated – the stated value thus is not comparable with the data from 2004–2011.



# IX. Occupational Health and Safety and Fire Protection

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

- Improve working conditions and measures related to occupational health and safety and fire protection in compliance with the appropriate legal regulations and standards;
- Improve risk evaluation methods and prevention measures for eliminating injuries and work-related illnesses;
- Introduce measures leading to an improved work productivity;
- Develop skills of their employees and introduce measures that lead to better working environments;
- Inform their employees and the public about the valid internal standards for securing occupational health and safety and fire protection and about their impacts.

## Injuries

In comparison with 2011, the total registered number of injuries in 2012 in the Unipetrol Group was significantly lower, especially in the area of injuries and work disability. The reduction was positively influenced by system measures of a short-term, development and conceptual character adopted in 2011.

In 2012, no fatal injury was recorded among the employees of the Unipetrol Group.

The following data demonstrate the long-term level of the occupational health and safety measures in the Unipetrol Group.

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

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	0.27	0.24	0.17	0.27	0	0.24	0.26	0.06	0.06
Česká rafinérská	0.4	0.3	0	0.3	0.14	0.45	0.15	0	0.16
Paramo	0.11	0	0.7	0.49	0.39	0.28	0.3	0.92	0.17
Benzina	0.52	0.61	0	0	0	0	0	0	0
Unipetrol Doprava	1.34	2.33	0.58	0.81	0.41	0.22	0.46	0	0

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

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	1.62	1.46	1.02	1.71	0	1.45	1.53	0.33	0.36
Česká rafinérská	2.4	1.7	0	1.7	0.8	2.8	0.89	0	0.9
Paramo	0.63	0.68	4.21	2.94	2.31	1.65	1.74	5.39	2.02
Benzina	3.15	3.55	0	0	0	0	0	0	0
Unipetrol Doprava	7.67	13.01	3.28	4.54	2.25	1.18	2.42	0	0

**Number of fatalities**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	0	0	0	0	0	0	0	0	0
Česká rafinářská	0	0	0	0	0	0	0	0	0
Paramo	0	0	0	1	0	0	0	0	0
Benzina	0	0	0	0	0	0	0	0	0
Unipetrol Doprava	0	1	0	0	0	0	0	0	0
Unipetrol Group	0	1	0	1	0	0	0	0	0

**Number of registered work injuries**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	28	14	11	13	10	14	14	7	8
Česká rafinářská	7	9	9	10	3	4	7	4	4
Paramo	12	8	20	14	8	3	2	13	5
Benzina	1	1	0	0	0	0	0	0	0
Unipetrol Doprava	25	22	10	11	9	1	8	3	2
Unipetrol Group	73	54	50	48	33	23	31	27	19

**Number of work injuries resulting in work disability longer than 3 days**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	7	6	4	6	0	5	5	1	1
Česká rafinářská	3	2	0	2	1	3	1	0	1
Paramo	1	1	6	4	3	2	2	6	1
Benzina	1	1	0	0	0	0	0	0	0
Unipetrol Doprava	7	11	3	4	2	1	2	0	0
Unipetrol Group	19	21	13	16	6	11	10	7	3

### Work-related illnesses

In 2012, no case of work-related illnesses was registered in the Unipetrol Group.

### Number of new cases of work-related illnesses

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unipetrol RPA	0	0	0	1 <sup>1)</sup>	1 <sup>1)</sup>	0	0	0	0
Česká rafinářská	0	0	0	0	0	0	0	0	0
Paramo	0	0	0	0	0	0	0	0	0
Benzina	0	0	0	0	0	0	0	0	0
Unipetrol Doprava	0	0	0	0	0	0	0	0	0
Unipetrol Group	0	0	0	1	1	0	0	0	0

1) Illness caused by polycyclic condensed hydrocarbons

### Prevention, personal protective aids and accessories

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

### Quality of the work environment

Based on the executed work categorization, the work environment conditions at the companies of the Unipetrol Group are regularly inspected by measuring individual work environment factors, especially the exposure to excessive noise, chemical substances and dust. The measurements conducted in 2012 confirmed the ever smaller number of the exceeded permitted exposure limits and the highest permitted concentrations.

### Medical care and prevention

The companies of the Unipetrol Group have concluded contracts with individual physicians for providing work-related medical services. Preventive medical examinations are conducted in accordance with the appropriate legal regulations and pursuant to the decisions adopted by the Hygienic Service authorities.

# Important Milestones of the Unipetrol Group in 2012 from the Perspective of Occupational Health and Safety and the Protection of the Environment

## Unipetrol RPA

- Between August 22<sup>nd</sup>, 2011 and November 14<sup>th</sup>, 2012, the company employees worked a total of 3,350,000 hours with any registered work injury that would result in work disability;
- New system of work permits was launched.
- As of January 2<sup>nd</sup>, 2013, the outdated urea production facility was put out of operation;
- EIA proceedings with the objective to evaluate the impact of the intended construction of a new, modern PE3 polyethylene production facility on the environment commenced;
- New Monitoring Plans for monitoring and reporting green house gas emissions for the period of 2013-2020, pursuant to the requirements of the amended legislature, were submitted to the Ministry;
- A stable emergency profile on the Bílina River for efficient catchment of accidental leaks of harmful substances to the Bílina River was built;
- Segregation of sewage water from the rain sewerage system and its transfer to biological cleaning;
- Continuation of the cooperation with the Czech Fishing Union for the period of 2013–2014, with the objective to increase the fish population in the Bílina River, was approved.

## Unipetrol Doprava

- Emergency practice drills were conducted in all plants and in cooperation with the fire rescue units of the owners of the given premises with the objective to verify the functionality of the Internal Emergency Plans pursuant to Act No. 59/2006 Coll., on the Prevention of Major Accidents;
- In 2012, the company posted yet another significant success in the area of OHS – once again, there was no work injury resulting in work disability. It means that the company extended its injury-free period to two years. In other words, as of December 31<sup>st</sup>, 2012, the company employees had already worked a total 1,677,422 hours without any injury that would result in work disability.

## Benzina

- Selection of the contractor for the rehabilitation of the Točnick distribution warehouse;
- Rehabilitation of the Tachov, Polička and Mikulov gas stations; completion of the Havířov-Suchá DS (product pipeline);
- Securing continuation of the protective remediation extraction financed by the Ministry of Finances.

### Česká rafinérská

- During 2012, based on the application submitted by Česká rafinérská, 2 changes of the integrated permit for the Litvínov refinery and 1 change for the Kralupy refinery were issued. The decision permitted repairs of the technological device at the sulphur production facility and modifications of the burners of the atmospheric distillation furnaces;
- In Kralupy, first two stages of the project for an extension of the hydraulic barrier were completed. As a result, the pollution of underground water was significantly reduced;
- New Monitoring Plans for monitoring and reporting green house gas emissions for the period of 2013-2020, pursuant to the requirements of the amended legislature, were submitted to the Ministry
- Česká rafinérská actively participated in processing the amendments of the BREF reference document with the objective to utilize the best available technologies in the refinery sector.

### Paramo

- Successful LRQA re-certification audit related to the fulfillment of the requirements specified in ISO 14001, ISO 9001 and OHSAS 18001;
- New Monitoring Plans for monitoring and reporting green house gas emissions for the period of 2013-2020, pursuant to the requirements of the amended legislature, were submitted to the Ministry
- Completion of the investment project subsidized from the Environmental Operational Program – Reconstruction of the storage reservoirs, including implementation of an emergency reservoir PS 0404;
- Preparation of an update of the remediation intervention documentation for the Pardubice facilities and commencement of negotiations with the Ministry of Finances on commencing the rehabilitation intervention of stage 1A;
- Preferential burning of natural gas in both boiler rooms of the refinery reduced the overall emissions produced by the combustion sources.

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