



# KARACHAGANAK SUSTAINABILITY REPORT



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# 2011

## THE ENDURING BENEFITS OF KARACHAGANAK

- Total 2011 production exceeded 138 million barrels of oil equivalent
- Fourth Stabilisation Train at the Karachaganak Production Complex completed
- World class gas utilisation rate of 99.92 per cent
- Reduction in greenhouse gas emissions of one million tonnes CO<sub>2</sub> equivalent over last five years
- New landfill waste polygon commissioned
- Renewed certifications for OHSAS 18001 and ISO 14001 safety and environmental standards
- National staff filling 95 per cent of the professional and supervisory roles, and 69 per cent of the managerial positions
- Local Content accounted for 38 per cent of spend (USD 268 million)
- Contracts worth over USD 387 million placed with 341 Kazakhstani companies
- Uralsk Gas Pipeline project completed
- Over USD 30 million invested in Social projects
- Project Development office opened in Astana



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## OUR COMMITMENT TO SUSTAINABLE DEVELOPMENT

Our commitment to sustainable development is defined in our Sustainability Charter.

We take as our reference the Brundtland Commission's widely acknowledged definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

As a business, KPO considers its contribution to sustainable development to be:

- minimising impacts and maximising opportunities linked to its presence;
- considering the long-term consequences of its decisions;
- engaging its stakeholders in a constructive dialogue; and
- incorporating strong governance and transparency.



*This is the fourth sustainability report issued by Karachaganak Petroleum Operating B.V. (KPO) with the aim to demonstrate our continuous commitment to sustainable development. KPO was the first company in Kazakhstan to issue an independently assured sustainability report in accordance with international standards in 2009.*

#### REPORT PROFILE

The present report is for the 2011 year. It also contains information from the 2010 and 2009 to ensure an evaluation of our performance over the previous years. The report is intended to be issued annually.

#### REPORT SCOPE AND BOUNDARIES

This report includes information on KPO's main activities as described in the section "Operating Karachaganak". The content covers the material aspects of our environmental, social and economic performance.

#### ASSURANCE

The accuracy of the provided data has been independently assured by Ernst & Young. The independent assurance report is included on pages 56-57. This procedure is implemented to ensure the transparency and objectivity of information given in the report.

#### GLOBAL REPORTING INITIATIVE

This report has been produced in line with the Global Reporting Initiative's G3 guidelines, the *de facto* global model for sustainability reporting. We have maintained a C+ application level for 2011. The Standard Disclosures table is included as an annex to this report; it is also available at [www.kpo.kz](http://www.kpo.kz).

#### STAKEHOLDERS

As part of our normal business practice, we engage and consult with a wide range of stakeholders, including the government, the local community, vendors, employees and civil society. Good relationships with these stakeholder groups are essential to our long-term success, and input from our dialogue with them has helped to shape the content of this report.



## LETTER FROM THE GENERAL DIRECTOR

I am pleased to present the fourth KPO Sustainability Report covering the year 2011.

First of all, I would like to reiterate that KPO remains committed to implementing sustainability priorities applying best practice and the principles of the Global Reporting Initiative, all within the framework set by the FPSA.

At KPO we strive to ensure continuous improvement in safety and environmental performance, production efficiency, and local capability through nationalisation and development of Kazakhstani talent and use of local goods and services.

As a business, KPO undertakes a number of investment projects and programmes targeting both operations and sustainability aspects. The major 2011 milestone achieved in operations is a completion of the Fourth Stabilisation Train at the Karachaganak Production Complex (KPC). The total volume of investments by KPO into the Fourth Train project has exceeded USD 1 billion. The major works were conducted by 14 Kazakhstani contractors employing over 2,900 people with USD 650 million spent in the Republic of Kazakhstan.

On 9<sup>th</sup> December 2011, KPO took part in a nationwide TV satellite bridge with the President of the Republic of Kazakhstan Nursultan Nazarbayev dedicated to presentation of projects launched as part of the RoK 2011 Industrialization Map including the Fourth Train. Nursultan Nazarbayev specially noted the implementation of the Fourth Train project that would increase the stabilization capacity of the KPC by 2.57 million tonnes of condensate per year.

The start up activities on expansion of the capacity of Karachaganak operations with the KPC Fourth Train has allowed KPO to produce over 138 million barrels of oil equivalent of hydrocarbons in 2011.

To seek to ensure zero incidents in the future and enhance HSE effectiveness at KPO during the year, we have been working on implementation of the set targets in all areas of the annual HSE Plan – leadership, contractor management, hazard awareness and risk control, monitoring and review, and road safety. In March 2011, sadly, a fatal incident occurred with a KPO employee. The case was

thoroughly investigated and an action plan implemented to prevent reoccurrence in the future. Having learned this lesson, KPO has undertaken a company-wide stand-down to reinforce safety messages to all KPO and contractor employees. Company efforts have allowed reducing reportable road traffic incident frequency in 2011 from 0.09 in 2010 to 0.03 incidents per million km driven.

In September 2011, KPO has successfully extended certifications for our Occupational Health and Safety Management System and Environmental Management System against the OHSAS 18001 and ISO 14001 standards.

Company spending for implementation of the KPO Environmental Protection Measures Plan amounted to USD 22.4 million for 2011. Following the five-year strategy on reducing greenhouse gas (GHG) emissions, KPO has implemented GHG reduction projects that totalled one million tonnes of CO<sub>2</sub> in 2011. Specific greenhouse gas emissions have decreased in 2011 from 83.9 to 83.5 tonnes of CO<sub>2</sub>e per kiloton of hydrocarbons produced. Flaring reduction remains a key area of KPO's commitment and only 0.08 per cent of the total gas produced by KPO in 2011 was flared as opposed to 0.13 per cent in 2010. KPO therefore demonstrates a world-class gas utilisation rate of 99.92 per cent whilst the regulatory target approved within Gas Utilisation Programme is 99.75 per cent.

Execution of the ten-year Nationalisation Plan has been continued. As of year end, national staff filled all skilled and clerical positions, 95 per cent of the professional and supervisory roles and 69 per cent of the managerial positions in KPO.

Implementation of the SAP project at KPO throughout 2011 has brought internal processes in line with industry standard requirements.

In 2011, KPO's total investments in the social infrastructure and philanthropy projects amounted to more than USD 30 million. The Uralsk Gas Pipeline was successfully completed in September followed with subsequent handover to the local owner. The pipeline connecting community settlements from the Karachaganak field to Uralsk is an important social infrastructure project that will ensure stable gas supply to more than one hundred thousand residents of five districts of the Western Kazakhstan Oblast. A number of social infrastructure projects have also been completed, such as construction of the heating networks from the constructed 54 MW Gas Turbine Station in Uralsk, water pipeline Akbulak-Aksai, reconstruction of the Boiler house in micro-district 10 of Aksai and the school in Priuralnoye village, and construction of music school in Zhympty village.

KPO commitment in local content development has resulted in awarding contracts worth over USD 387 million to 341 Kazakhstani companies for the provision of goods, works and services. The Kazakh Content in Karachaganak venture made up to 38 per cent of spend (USD 268 million).







In December 2011 negotiations between the Republic and the Contractor resulted in settling material outstanding disputes and with the acquisition by KMG of a share in the Karachaganak venture, to be completed in June 2012. This supports the further development of the field.

I strongly believe that KPO contributes substantially to the sustainable growth of Aksai, Burlin District, Western Kazakhstan Oblast and the Republic of Kazakhstan as a whole. Our activities and achievements during 2011 have once again demonstrated the commitment of the Karachaganak Venture to continue investing into development and sustaining new production records for the benefit of all KPO partners and stakeholders.



Damiano Ratti  
KPO General Director

# OUR PERFORMANCE AND TARGETS

Our targets in 2011	Actions taken in 2011	Our Target for 2012
<b>HEALTH AND SAFETY</b>		
Obtain re-certification in OHSAS 18001	 The re-certification audit successfully implemented in August 2011.	Next audit to be conducted by a certification body is planned for 2012
Launch new HSE Observation Reporting combining the hazard reporting and BBS observation systems	 New HSE Card programme was launched in December 2011. Complete package for launch was prepared for effective implementation (card, procedures, award system, database, training materials, etc). HSE Card is used to report hazards, safe or unsafe behaviours by KPO and contractors' personnel. The Card can be used to propose suggestions in HSE area. The Card is also used to communicate feedback as a tool for HSE continuous improvement.	Develop and implement HSE cards e-learning
Implement a Major Hazard Awareness Training Program for KPO workforce	 Materials for Major Hazard Training Course for Levels 2 and 3 Operators developed. Main topics include process safety, "swiss cheese" model, major risks, risk management strategy, Declaration of Safety. Level 2 training package, training plan and schedule have been completed. The training targets specified within the Process Safety Integrity Management plan achieved. Training sessions ongoing.	Expand Major Hazard Awareness programme to Managers
Expand safety leadership skill base to those already trained and extend the programme to include health and environment	 Pilot HSE Culture perception survey and HSE forum with national workforce were carried out.	Based on the outcomes of HSE Culture perception survey, training materials to be aligned and further HSE intervention techniques programme to be rolled out in 2012. This is reflected in 2012 HSE Plan.
Finalise documentation related to Contractor Management processes. Conduct workshops for Contract Owners and integrated Contractor/KPO forums	 A KPO wide integrated Contractor HSE Forum was held in mid year. A number of workshops and forums for specific departments have been held throughout the year. Five half day training sessions for contract owners on roles and responsibilities were performed supported by a summary handbook and Intranet page. Three workshops with contract owners were conducted. Preparation of documentation for remaining activities in contractor management area including training in progress.	Contractor Management Working Group (CMWG) has been working during 2011 to bring improvements to KPO Contractor Management processes. The outstanding HSE related action items contained within the CMWG Action Plan to be complete in 2012. Training on new/revised processes to roll out. An overarching KPO standard to monitor the HSE performance of contractors to be developed.
Review, consolidate and rationalise the HSE audit, inspection and management tour programme for all KPO	 Initiated by General Director, an audit of HSE Inspections and Audits System was conducted by KPO Corporate Audit team. Action Plan was developed based on the audit recommendations. Draft audit and inspection procedure consolidating level 1 and 2 audits was developed and then implemented through two trial audits performed at Bolshoi Chagan and KPC at the end of 2011. Audit schedules and check lists are at the finalization stage.	Application of the new audit and inspection procedure to be completed at the end of Q1 2012
Rejuvenate Life Savers that had been launched in 2009	 Life Savers campaign originally implemented in 2009 was revised in 2011 with a new Life Saver topic added for Electrical Safety. Communication tools for Working at Height and Excavation have been additionally developed and rolled out in the course of the year.	Develop a KPO wide Life Saver roll out campaign for all Life Saver topics including supporting materials – presentations, posters tool box talks and leadership tours cards and e-learning





KPC field administrative building

LEGEND:

- implemented;
- work in progress;
- not completed.

# OUR PERFORMANCE AND TARGETS

Our targets in 2011	Actions taken in 2011	Our Target for 2012
<b>ENVIRONMENT</b>		
Achieve total project reduction of GHG emissions by 46.7 ktonnes CO <sub>2</sub> e	✓ Projects to reduce GHG emissions achieved reduction of 57.6 ktonnes CO <sub>2</sub> e.	Achieve total project reduction of GHG emissions by 30.97 ktonnes CO <sub>2</sub> e
Implement the Fieldwide Wastewater Upgrade Project	~ Detailed Design is under review. Expertise and Construction permits complete. Procurement is in progress.	Complete the project in 2012
		Conduct a study of further sewage treatment efficiency improvement
Commission of two new automatic Environmental Monitoring Stations (EMS) close to the Berezovka village	✓ Two EMS stations have been installed in 2011.	Install two new automatic Environmental Monitoring Stations at the Sanitary Protective Zone (SPZ) boundary
Issue and implement Biodiversity Standard and Action Plan	~ Biodiversity Action Plan has been issued.	Start implementation of the Biodiversity Action Plan
Complete construction of the waste segregation unit;	~ The scope of work scheduled for 2011 was implemented. Preparation activity was carried out. The contract is signed and accordingly the design project to upgrade the warehouse No. 3 of Eco centre waste segregation unit has been started and is 65 per cent complete.	Remodel the facility and install equipment followed by commissioning of the waste segregation unit; Introduce into service.
Evaluate feasibility of recycling opportunities for plastic waste.	Market research for plastic waste recycling was done.	
Commission of five cells at landfill for burial of solid industrial waste from Eco Centre	✓ New landfill has been commissioned in December 2011. Seven cells at the landfill have been put into operation.	Commission five additional waste burial cells at the landfill
		Study waste accumulated in cell 1 for further recycling and disposal in Eco Centre's landfill. Study all legacy waste in cells 2, 3 & 4 at old polygon, and develop a plan for treatment if necessary and permanent disposal at the Eco Centre Landfill;
		Study on re-use methods of wastes after Thermo-mechanical cuttings cleaning facility and Rotary kiln incinerator.
Commission the General Purpose Incinerator (GPI)	~ Start-up of General Purpose Incinerator is ongoing with the plan to be commissioned in Q2 2012.	Complete commissioning and introduce into service in 2012
Recertify the Environmental Management System and conduct further supervisory audits to confirm compliance with ISO 14001 requirements	✓ Compliance with ISO 14001 successfully confirmed in September 2011.	ISO 14001 and OHSAS 18001 surveillance audit to ensure compliance with standards requirements
<b>OUR PEOPLE</b>		
Finalise the Competency Management System (CMS) development and launch on-line system to implement and manage professional development needs identification (PDNI)	~ Development of Competency Models (CM) for non-technical jobs. Start-up development of the Competency Model for Finance Directorate.	Complete Competency Models development for Finance Directorate. Launch a software application for CMS

Our targets in 2011	Actions taken in 2011	Our Target for 2012
<b>OUR PEOPLE</b>		
Achieve OPITO accreditation for Production & Maintenance CMS system	~ Desktop Audit performed by OPITO and recommendations received.	Apply for OPITO site audit. On completion of satisfactory site audit to receive OPITO accreditation for technical CMS. Delay in completion of desk top audit due to strategy change requiring some documents changes. Expected completion Q4 2012.
Expand technical CMS framework to other departments in Operations Directorate	~ The project is implemented by phases. Started in 2011, phase 1 included assessor training for Field HSE personnel; Field HSE have started producing standards and performing assessments.	Continue performing assessments for front line technical personnel of Production & Maintenance department, and HSE Life savers awareness assessment as part of phase 1 of the project. Phase 2 involving non technical personnel is scheduled for 2013/14; phase 3 will focus on bringing contractors in line with KPO CMS. Field HSE are finalising standards and assessing against some of these standards. Life Saver assessments are in progress. Around 25 per cent of Life Saver awareness assessments have been completed for front line P&M personnel. Other departments in Operations Directorate are targeted to start end 2012.
Introduce coaching scheme for National staff development and knowledge transfer	~ The programme has been drafted, implementation plan is ready.	Implement the coaching programme
<b>ECONOMIC DEVELOPMENT</b>		
Nationalisation Plan 2011 Targets Category 1 – 64 per cent; Category 2 – 92 per cent.	✓ Category 1 – 69 per cent achieved; Category 2 – 95 per cent achieved.	70 per cent to achieve in Category 1; 95 per cent to maintain in Category 2.
Enhance retention programme for National employees	~ The programme framework has been defined and presented to management for approval and communication to the Authority.	Agree with the Authority and develop necessary policies and procedures for the National staff retention programme. Implement retention tools.
Contribute to the continued development of the national market for production of goods and services demanded in oil and gas sector of the Republic of Kazakhstan	✓ Pilot Project of Aksai Industrial Park launched. The ceremony commemorating the “first stone” of the Aksai Industrial Park Project took place in June 2011.	Official opening of the Aksai Industrial Park is scheduled for Q2 2012
Achieve 20 per cent local content out of total expenditure for purchasing of goods and services of the Kazakhstani origin	✓ Local content made up to 37.5 per cent.	Stretch target for Local Content – 40 per cent
Proactively work to ensure safety and quality standards are met and to implement the new Local Content reporting system and calculation methodology	✓ KPO registered at the RoK Ministry of Oil and Gas (MOG) web-portal for reporting on Local Content. KPO Local Content reports are prepared as per Unified Local Content Calculation methodology and uploaded on the MOG portal in compliance with the RoK subsoil use legislation.	Maintain compliance with RoK local content legislation
<b>COMMUNITY</b>		
Issue the Social Performance Plan 2011-2012	✓ Social Performance Plan issued in June 2011	Issue the 2012 Social Performance Plan
According to the outcome of the discussions, undertake a review of the feasibility of the Rural Development Programme	✗ No confirmation received on the outcomes of the discussions on this programme between the Karachaganak Partners and the Authority	Seek confirmation about availability of funding for resuming of the long-term community development projects in 2012
Monitor the effectiveness of the new grievance procedure and proactively manage all issues raised	✓ First year review of the revised Grievance procedure completed	Continue monitoring of the grievance procedure

# OPERATING KARACHAGANAK

The Karachaganak field is one of the world's largest oil and gas condensate fields. Located in north-west Kazakhstan and covering an area of more than 280 square kilometres, it is estimated to contain 9 billion barrels of condensate and 48 trillion cubic feet (tcf) of gas, of which approximately 10 per cent has been recovered to date.

The Karachaganak field is located in a remote and challenging working environment, where the ambient temperature ranges from minus 40 degrees Celsius in winter to plus 40 degrees in summer. The field, the top of which is located at a depth of around 3,500 metres, is some 1,600 metres thick and very complex. The hydrocarbons contain up to 4.5 per cent of highly toxic hydrogen sulphide, as well as carbon dioxide which can, in certain conditions, be highly corrosive.

Since 1997, the Karachaganak field has been developed and operated by Agip and BG, with principal operating functions being delegated to KPO, an operating entity owned by the four international oil companies that entered into the Final Production Sharing Agreement (FPSA) with the Republic of Kazakhstan in 1997: BG and Agip (joint operators with 32.5 per cent holding each), Chevron (20 per cent holding (formerly Texaco)) and LUKOIL (15 per cent holding) (together referred to as the "Contractor").

The FPSA places responsibility for the field development with the Contractor until 2038. The companies making up the Contractor pool their combined international experience to share it with the Republic so that the maximum value can be realized from the Karachaganak field.

Some 4,000 people work in KPO today to form a talented and multicultural team. Since the signing of the FPSA, the Contractor has invested USD 17 billion into developing the field, applying industry leading technology aimed at maximizing sustainable economic value.

To maximize net sales revenues, most of the hydrocarbons produced are exported. Following the commissioning of the fourth liquid stabilisation train at KPC in 2011, around 90 per cent of liquid production is exported as crude oil to Western markets via the CPC pipeline to Novorossiysk on the Black Sea and the Atyrau-Samara pipeline to the Transneft system for onward shipment to Primorsk on the Baltic Sea, Novorossiysk on the Black Sea and other European destinations. The sales, performed either to Trading Affiliates of KPO's Parent Companies or third party buyers, are realised at international price benchmarks. The remaining liquids are exported as unstabilised condensate to Russia via Orenburg. Virtually all of the gas that is produced from the field is either sold as raw gas to KazRosGas (and further to Russia) or re-injected into the reservoir to help maintain reservoir pressure. A small percentage (4.45 per cent) of the gas is sweetened to remove the hydrogen sulphide before it is used either to generate electricity or provide heating. Only 0.08 per cent of the produced gas is flared in normal production and drilling operations. More details on gas utilization at Karachaganak can be found in the section "Delivering environmental performance" on page 28.

## Achievements obtained by deploying advanced technology include:

- developing an innovative high-pressure, high-volume sour gas re-injection system;
- drilling the deepest multilateral wells in Kazakhstan to date;
- reducing greenhouse gas (GHG) emissions from well testing and operations through the pioneering use of a well testing equipment and Dry Low NO<sub>x</sub> (DLN) tuning of gas turbines.

For a description of the field layout, please see pages 14-15.



## 2011 Production

<b>Total Production</b>	<b>Mboe</b>	<b>138.5</b>
Unstable Liquids <i>Condensate to Orenburg Gas Plant and Mini Refinery</i>	kt	1,498
Stable Liquids <i>Oil and stabilised condensate to CPC and Atyrau-Samara</i>	kt	9,542
Raw gas <i>To Orenburg Gas Plant</i>	Mscm	7,974
Sweet gas production <i>Providing energy for the plant and the community</i>	Mscm	751
Gas injection <i>Not included in total production, as this is not sold</i>	Mscm	8,129

## 2011 OPERATIONS AND FUTURE GROWTH OPPORTUNITIES

In 2011, KPO produced 138 million barrels of oil equivalent in the form of stable and unstable liquids, sour gas, and sweet gas for use as fuel. This is an increase of about 4 million barrels of oil equivalent as compared to 2010 when a mandatory total field shutdown was conducted in September-October 2010. In addition, 8,129 million cubic feet of sour dry gas was injected into the reservoir, a volume equivalent to approximately 48 per cent of the total gas extracted.

### The principal development activities that KPO undertook in 2011 were to:

- drill four wells and continue its programme of well workovers to optimise production and injection well stock in the field;
- successfully complete and started-up the fourth liquid stabilisation train at KPC;
- as part of the Social and Infrastructure projects, complete the new Uralsk Sweet Gas Pipeline that will supply sweet gas to domestic consumers in West Kazakhstan Oblast;
- continue the capital works planned to upgrade asset integrity;
- continue the capital projects part of 2011-2013 Environmental Protective Measures Plan (EPMP);
- examine a series of short-term development opportunities that will act as stop-gaps between the current stage of field development and the eventual long-term development and whose primary purpose would be to preserve the current production rate from the field.

# KARACHAGANAK AT A GLANCE



## ECO-CENTRE

The Eco Centre combines world-class waste treatment facilities dedicated to the treatment of oil and gas drilling and production wastes. The KPO Eco Centre consists of five key processing facilities:

- Thermo-mechanical cuttings cleaning facility, which enables the safe and efficient treatment of oil-base mud cuttings;
- Liquid mud plant, the processing facility for mixing and treating drilling oil based mud;
- Liquid treatment plant enabling treatment of hydrocarbon contaminated water, recycling of brines used for work-over operations and reconditioning of water-based mud used in top hole drilling operations;
- Rotary kiln incinerator used to process oil contaminated soil and materials other than drilling cuttings,
- New landfill commissioned in December 2011 that ensures safe disposal of solid waste.

New general purpose incinerator and waste segregation facility are under construction with commissioning to be completed within 2012.

## AN INTERCONNECTED SYSTEM

83 producing wells and 15 sour gas re-injection wells are currently online at Karachaganak, with a total well stock of 371 wells. Production and processing occurs at the three major units: the Karachaganak Processing Complex, Unit 2 and Unit 3. Approximately 2,000 kilometres of pipelines make up the infield system linking the major facilities and allowing efficient flows of production from the wells and among the units.

## KPC

The Karachaganak Processing Complex processes oil condensate from 37 production wells and from Unit 2. Oil and gas are separated through slug-catchers. The oil feed is treated by four stabilisation trains and pumped into the export pipeline to Atyrau for sale on international markets.

Completed in 2011 the fourth liquids stabilisation and sweetening train was designed to increase the production of stabilised and sweetened liquids to high value western markets. The overall project sanctioned by partners in 2006 has included an additional condensate stabilisation and sweetening train, the expansion of the existing Karachaganak Processing Complex (KPC) inlet facilities and some 13 new wells, an additional Sour Gas Export Compressor, additional set of Condensate Booster Pumps and Export Pumps, and two infield pipelines with associated tie-ins to Unit 3 and EOPS.

The gas phase splits into two streams. One feeds the sweetening plant, providing fuel gas supply for the field's power station and sweet gas supply for the local market. The second stream is directed to Unit 2 for re-injection and/or to Unit 3 for export to Orenburg.

## UNIT 3

Unit 3 facility, operating since 1984, separates and partially stabilises gas and oil condensate from 27 incoming wells before exporting via pipeline to a processing facility at Orenburg Processing Plant in Russia.

Unstabilised condensate is also supplied to a neighbouring privately-owned facility for treatment.

## UNIT 2

Introducing leading technology edge has made Unit 2 a unique multi-functional facility. It is able to separate, process and re-inject high pressure sour gas and to produce oil, then send for stabilization at KPC prior to export. 19 incoming production wells feed Unit 2.

One of the highest pressure sour gas injection systems in the world is in place at Unit 2. Three compressors are capable of injecting gas at a pressure up to 550 bar with a high H<sub>2</sub>S content (up to 9 per cent).

This gas injection scheme has been proving to be successful as it provides partial pressure maintenance, improves liquid recovery and also eliminates the need to extract sulphur, which delivers important environmental benefits.



# CORPORATE GOVERNANCE AT KPO

Good governance is essential for ensuring the sustainability of large-scale investments. In the more complex environment of a joint venture such as KPO, our strong governance, controls and assurance processes are vital to our ongoing success.

## ORGANISATION AND GOVERNANCE STRUCTURE

Our organisational structure has been designed to help us meet our business objectives and fulfill our obligations to the Kazakhstan authorities as set out in the FPSA, the Venture's governing document.

KPO's most senior governance body is the Joint Operating Committee, which comprises senior management from the four Contractor companies and representatives from the Authority which is appointed by the Republic of Kazakhstan.

KPO's most senior management is the Board of Directors. The Karachaganak venture's most senior management body, the Contractor's Committee, comprises representatives from the four Parent Companies. The lower level of the management body is the Operating Committee comprising representatives of the operating parent companies, BG and Eni.

A number of sub-committees responsible for specific tasks in the areas such as operations, marketing, HSE, HR, work program & budget, finance, tax, legal, audit, insurance, government relations, sustainability, security are assigned to support both Contractor's and Operating committees.

The General Director, the deputy General Director and other directors of KPO are nominated by their respective Parent Companies.

## MANAGEMENT SYSTEMS

In all aspects of its activities and in accordance with the FPSA, KPO operates to internationally recognized standards which are implemented in the company through a series of policies, procedures and appropriate best practices. These are embedded in our management systems and include our Code of Conduct, Health, Safety and Environment (HSE) Management System, HSE Policy, Operations Management System and Corporate Management System Manual.

In 2009, following intensive work conducted by the Operators Sustainability Working Group, KPO issued its Sustainable Development Charter. This charter is intended to lay the foundations and set the guiding principles for KPO's efforts towards sustainable development; and is drawn from international best practice and the Operator companies' experience.

The KPO Sustainable Development Charter is available at [www.kpo.kz](http://www.kpo.kz) and on the company's intranet portal.

## ASSURANCE

All these systems and policies are subject to audits, which provide assurance to KPO management and the four Parent Companies that effective and efficient processes are in place to identify and manage risk, including sustainability risk, and to ensure compliance with approved processes. Internally, assurance activities are undertaken by a number of groups including Internal Corporate Audit, which audits all of KPO's activities. Specific areas are identified for audit each year using KPO's internal risk management system, discussions with directors, Parent Company requests and KPO's own Audit Model, which details KPO process areas and the required audit frequency for each area.

In addition to internal assurance processes, our HSE Management System is externally certified to ISO 14001, the internationally recognized Environmental Management System standard. In 2009, we achieved OHSAS 18001 certification for the occupa-

tional health and safety aspects of our management system.

In 2011 the Company has successfully completed the re-certification audit of our Occupational Health and Safety Management System and Environmental Management System against the OHSAS 18001 and ISO 14001 standards.

External assurance reviews also occur on a regular basis, including an annual Parent Company Audit to ensure KPO complies with its own policies and standards and industry best practices, and regulatory reviews to ensure compliance with Republic of Kazakhstan legislation.

## COMPLIANCE FRAMEWORK

The Compliance Framework regulates and provides guidance on all aspects of Compliance throughout the company and establishes KPO's fundamental values and core beliefs, cascading and applying these throughout the organisation.

The main point of reference within the Compliance Framework is the Code of Conduct. This Code establishes the core ethical principles, values and behaviours that govern how KPO conducts its business. A revised Code of Conduct was launched by the General Director in early 2009. All KPO personnel are required to read the Code of Conduct, Conflict of Interest and Compliance Assurance Policies on the KPO intranet and confirm having read each of these policies.

Should any employee have a grievance or dispute within KPO, the Grievance Handling Procedure provides details of the procedure to be followed.

The Compliance Framework is managed by the Legal Compliance Counsel and Compliance Coordination Manager, both of whom work in the Legal Directorate. KPO has a Compliance Committee, which is chaired by the General Director, and it meets quarterly to review all matters relating to Compliance.

During 2011, a programme was introduced to provide additional training to all employees



on the Code of Conduct and other Compliance requirements. The objective is to create a culture of ethical behaviour in KPO, allowing each KPO employee to know what is expected of him or her as employee.

The Legal Directorate has also implemented a set of registers where compliance related matters are recorded, for example any hospitality and travel provided for non-KPO persons, any sponsorships agreements and payments, thefts of KPO property and the resulting investigations, any corporate gifts, hospitality and travel received by KPO personnel and a special register to record any allegations of corruption.

#### Anti-corruption due diligence process

KPO is committed to achieving and maintaining the highest standards of corporate governance, particularly in respect of compliance with ethical and legal requirements. KPO's success has been the product of a joint commitment, of all business partners, suppliers, vendors, contractors and service providers who play an important and valued role in our continuing business success.

KPO and its counterparties – vendors, suppliers, agents, freight forwarders, sub-contractors etc, are obliged to comply with relevant laws of the RoK and countries of incorporation of Contractor companies, in particular:

- The RoK legislation on Bribery enclose three types of responsibility for receiving/giving a Bribe as well as mediation in bribery:
  - RoK Criminal Code – Article 231 (Commercial Bribery), 311 (receiving a Bribe), 312 (giving a Bribe) and 313 (Mediation Bribery);
  - RoK Administrative Violations Code – Article 533 (giving a material compensation), 533-1 (receiving a material compensation);
- US Foreign Corrupt Practices Act;
- Italian Decree 231;
- UK Bribery Act 2010.

However, for KPO to continue to provide the best service to the RoK Authorities, our Partners and customers today, as well as in the future, it is imperative that we respond to the increasing challenges and requirements of an ethical and legal nature. In order for KPO to meet them we need the cooperation and support of our business partners. One of the key areas of concern in corporate governance is the prevention of corruption, bribery and money laundering. A key feature of governance and relevant legislation is to “know your business partners” and to request that your partners provide certain information with regards to their undertakings in respect of their activities and operations.

The suppliers responses will be used by KPO for the purpose of qualifying supplier to potentially perform services or deliver goods.

#### STAKEHOLDER ENGAGEMENT

Major stakeholder groups identified by KPO are the RoK government, the company's employees, local and regional communities, vendors and non-governmental organisations representing civil society. A number of departments within the company, such as Government Relations, External Affairs, Community Relations, Corporate Safety, Corporate Environment, Permits & Licensing, Internal Communications, Employee Relations, Local Content Development, engage regularly with these stakeholders.

KPO developed a Government Stakeholder Matrix which identifies the key RoK stakeholders along with the areas of interest, modes of engagement and KPO contacts.

KPO's Corporate Communications Policy outlines the mechanisms and processes that KPO uses at a corporate level to communicate internally and externally. It also provides lists of stakeholders with an indication of who within KPO is authorised to engage with external stakeholders. Processes with other relevant stakeholders are determined by several policies and procedures, such as the Stakeholder Engagement Operating Procedure, the Sponsorship and Donations Po-

licy, the Internal Communications Policy, and the Local Content Development Programme.

#### HUMAN RIGHTS

KPO supports the protection of human rights in its sphere of influence. KPO voluntarily tested its compliance with international standards and best practices in 2008 with the support of the Danish Institute for Human Rights and received a good assessment.

#### EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE

All four Parent Companies are signatories to the Extractive Industries Transparency Initiative (EITI) in Kazakhstan and support the efforts of the government and society to strengthen governance of the revenues generated by the extractive industry by improving transparency and accountability.

Each year, the partners in the KPO venture report to the EITI consolidating body the amounts they have each paid to the Republic.

#### PROMOTION OF THE KAZAKH LANGUAGE

KPO's official working languages are English and Russian, however increasing attention is being paid to develop and enhance the use of the Kazakh language. A language project team was created in KPO. Messages which are of general interest to staff are issued in the three languages; these include messages about safety, the HSE Policy, the Sustainability Charter and the KPO website. The Karachaganak Newsletter, the company magazine that reaches out to employees and a wide variety of stakeholders, includes a section in Kazakh. The company has developed its own trilingual technical glossary. Kazakh language training courses are available for all employees.



# HEALTH, SAFETY AND SECURITY

At KPO safety is an area of paramount importance. Developing and operating a field of Karachaganak's technical complexity requires every employee and contractor to work safely at all times. All oil and gas operations carry inherent safety risks: at Karachaganak, this challenge is compounded by extreme temperature fluctuations, the high hydrogen sulphide content in the hydrocarbons we produce and process, and high-pressure sour gas injection.



## HSE MANAGEMENT APPROACH

KPO's integrated HSE Management System outlines the framework for meeting targets on occupational health, safety, and environmental performance, controlling risks and encouraging continual HSE improvement. HSE Management System requirements are described in the HSE Management System Manual and the process has been implemented across the company. Senior management's commitment to continual improvement in HSE performance at KPO is represented in the HSE Policy endorsed by the General Director. The HSE Policy clearly states that KPO is fully committed to pro-actively managing health, safety and environmental protection and expects everyone to recognise their personal responsibility for HSE and their right to openly report any HSE issues of concern. The policy is applied to all assets owned and operated by KPO and all personnel operating for or on behalf of KPO, including contractors and visitors.

In August 2011, KPO successfully completed a recertification audit confirming compliance with requirements of OHSAS 18001 and ISO 14001 standards. Independent Certification body auditors highly appreciated management and company efforts on maintaining the HSE Management System that was first introduced in 2008.

On this basis, KPO received re-certification for its Occupational Health and Safety Management System and Environment

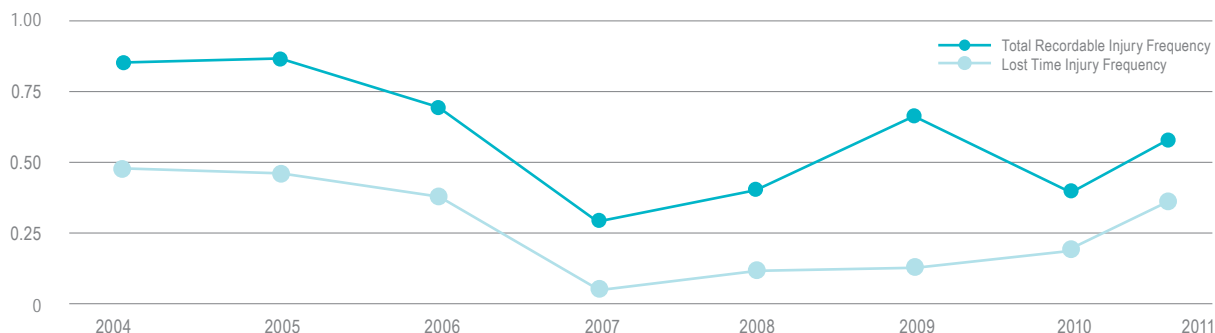
Management System Compliance until 2014. The scope of the certification includes exploration, production and distribution activities including KATS and KOTS pipelines, as well as project development and execution for the Karachaganak field.

## SAFETY PERFORMANCE IN 2011

In 2011, KPO's main construction activities (KPC Train 4, Unit 2 Material Replacement Project) were successfully completed, which led to the reduction of total man-hours worked. Also the definition of incidents and reporting requirements were reviewed to align with the latest OGP Health and Safety Incident Reporting System (User's Guide, Report No.433, dated February 2010). These changes increased the spectrum of the incidents identified as work-related compared with KPO definitions of the years previous to 2010. As a result of these changes, two out of the nine incidents classified as LTIs in 2011 would not have been classified as work-related LTIs in previous years. These factors contributed to KPO not achieving some of its HSE indicator targets.

KPO's overall safety performance for 2011 and for the previous seven years is presented in the graphs below. Chart 1 shows the overall Lost Time Injury Frequency (LTIF) for 2011 which was 0.34 (0.18 in 2010) and Total Recordable Injury Frequency (TRIF) was 0.53 (0.38 in 2010).

Chart 1



In 2011, despite a commitment and continued effort throughout the company to improve safety performance KPO experienced an increased number of Lost Time Injuries (LTIs). Sadly, on the 6<sup>th</sup> March 2011 a fatal incident occurred resulting in the tragic death of a KPO employee. A company wide safety stand-down was undertaken on the 22<sup>nd</sup> July to deliver safety messages to all company and contractor employees.

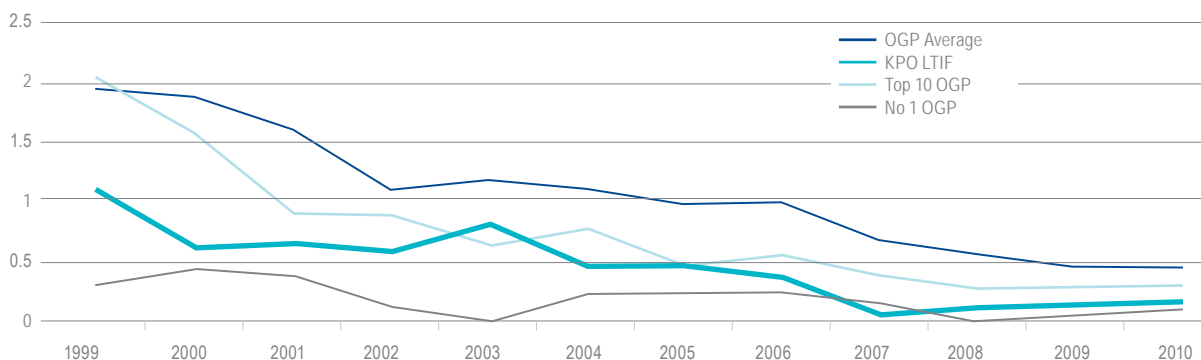
As with all incidents at KPO, each LTI occur-

ring in 2011 was thoroughly investigated by an internal investigation commission. Investigations revealed that KPO should remain committed to improving contractor management, enhancing HSE leadership skills of employees, as well as staying focused on work preparation and enforcement of standards and policies. These factors were identified as the most common root causes of the incidents. Action plans to prevent incident recurrence were developed, agreed and implemented. Closure of mitigating actions fol-

lowing investigations are tracked on KPO's Synergi web-based tracking system.

KPO's Key Performance Indicators (KPI) are annually benchmarked against statistical data, which is reported to the International Association of Oil and Gas Producers (OGP) by many world wide exploration and production operations. In 2010 KPO's LTIF performance exceeded the top quartile in OGP (Chart 2). At the time of writing the report, OGP data for 2011 was not available.

Chart 2



## KPO HSE PLAN 2011

In order to fully implement and build upon the improvements that were achieved by the KPO Safety Plan for 2010, the KPO HSE Plan for 2011 continued by incorporating occupational health and environment, as well as application of the plan KPO wide and enhancement of the four key elements of HSE Leadership; Contractor HSE Management; Hazard Awareness & Risk Control; and Monitoring and Review & Lessons Learned. Given the increased frequency and severity of road traffic incidents during 2010, an additional fifth element of Road safety was also added to the 2011 plan to achieve improved safety performance in this area.

The plan set strategic objectives and annual targets with specific actions and responsibilities assigned. Following the fatality the HSE Plan was reviewed, with some less critical

initiatives being deferred until 2012 to allow focus of effort on the implementation of lessons learned from the incident.

KPO objectives, plans and activities of 2011 in the five key elements of the HSE Plan are presented below.

### HSE LEADERSHIP

**Strategic Objective:** Improve HSE leadership and intervention techniques within KPO

This element required HSE Leadership indicators to be developed, introduced and monitored throughout 2011 for all levels of managers and comprised of targets being set for activities and behaviours that were thought to be relevant to demonstrating HSE leadership. An HSE Forum with the national workforce was conducted to establish trustworthy and sustainable relations between KPO employees and management to ensure

an exchange of information, opinions and issues on HSE and to capture ideas as to how to improve the HSE culture.

Cross departmental HSE Leadership tours were held throughout 2011, and were used as a proactive tool to demonstrate management's HSE commitment, to ensure two-way communication with employees of the Company and its contractors and to contribute to further improvements in HSE performance. Participation in HSE tours is mandatory for level 0, 1, 2 and 3 KPO managers. During the HSE Leadership tours managers question the awareness of individuals in the hazards and risks associated with performing their work activity and verify knowledge and fulfilment of the Life Saver requirements (see later section). Permits to work and associated risk assessments are also randomly scrutinised for accuracy and relevance.

Discussion at the Integrated Contractor HSE Forum in Aksai



## CONTRACTOR HSE MANAGEMENT

**Strategic objective:** Continue the programme to improve KPO's contract HSE processes and procedures throughout the life cycle with specific focus to be given to contractor control, competence and performance monitoring.

Given the scope of work and level of effort required to achieve this strategic objective, a dedicated Contractor Management Working Group (CMWG) was established at the end of 2010. Comprising of team members from different disciplines, the CMWG reviewed each stage of the contract management life-cycle and developed an action plan aimed at making a tangible difference to overall contractor management and performance. The basis of the plan was to:

- Implement an HSE risk based system to ensure an appropriate level of management control is applied.
- Increase awareness of all individuals with their roles within the life cycle of responsibilities by:
  - Simplifying and consolidating procedures and processes,
  - developing supporting guidelines and tools.

The achievements of the CMWG during 2011 included:

- The development of a Contract HSE Risk Assessment Methodology to enable all service contracts to be assigned an HSE risk ranking;
- An improved process for the extension of high HSE risk contracts;

- The review and extensive update of Contract HSE requirements in proportion to the HSE risk including a new requirement for the installation of in-vehicle monitoring systems in contractor vehicles;
- Definition of contract roles and responsibilities throughout the contract life cycle supported by handbooks and training sessions provided to contract owners in the company;
- The alignment of the pre-qualification process with Oil and Gas Producers and best industry practice incorporating a specific vendor assessment HSE question set and evaluation criteria in proportion to the level of HSE risk;
- Preparation of guideline documents describing the minimum requirements for scope of work development, contractor HSE plans, contractor meetings throughout the life cycle and contract close out;
- Negotiations to include contractor performance management targets in contract owner key performance indicators for 2012;
- Consolidation and enhancement of the current contractor performance monitoring procedures with preliminary discussions held relating to significant changes to be undertaken as a specific programme in 2012.

It is planned that the full suite of the CMWG deliverables will be rolled out to all personnel involved in contractor management via dedicated training sessions in 2012.

Throughout 2011, KPO continued to hold popular contractor forums, workshops and meetings to facilitate the sharing of knowledge and to enable contractors to raise concerns and make suggestions for improvement. Numerous audits and inspections of contractors frequently attended by contractor management were also performed.

## HAZARD AWARENESS AND RISK CONTROL

**Strategic Objectives:**

- Improve hazard awareness for all personnel (contractors and KPO);
- Review risk assessment process;
- Improve health and environmental hazard awareness.

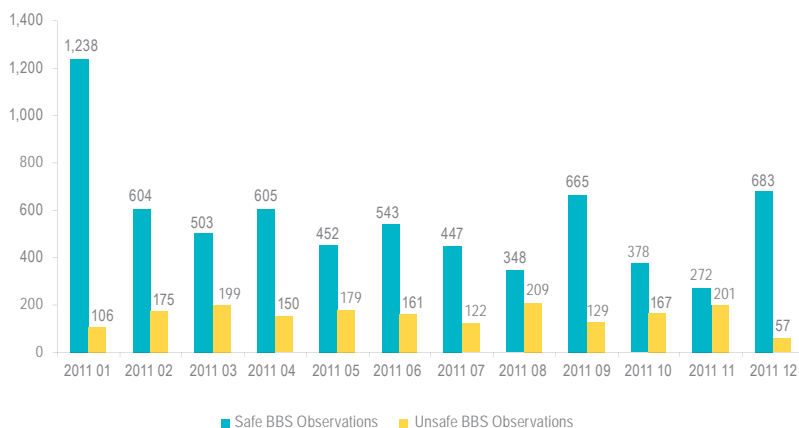
Hazard awareness of personnel, reporting, analysis and hazard control systems were included into the HSE plan as specific items to enhance proper and timely recognition of the workplace hazards by employees, identify its possible impact and apply control measures against them.

KPO's hazard reporting scheme is a proactive tool that allows any employee, contractor or visitor to raise concerns or report observed hazards. Thus, implementation of the scheme ensures continuous improvements in HSE and can help in preventing incidents.

Implemented at KPO during 2011, the Behavioural Based Safety (BBS) programme targeted to observe personnel while they performed routine activities and to proactively report good practices noted along with any unsafe acts, and to intervene and to correct any behaviour deviations. BBS programme

was utilised at all KPO facilities including Atyrau Terminal and Bolshoi Chagan. Total number of BBS cards submitted in 2011 was 8,593, of which 78 per cent related to safe observations and only 22 per cent to unsafe.

### 2011 Monthly BBS Cards Performance



Based on analysis of hazard reporting system and BBS programme, KPO made a decision to combine these two systems. As a result, a new HSE observation reporting programme was developed and rolled out in December 2011 supported by relevant procedures and an incentive scheme.

The new 'HSE Card' consolidates all previous methods for the reporting of hazards and behaviour based safety observations into a single card enabling all personnel to simply and efficiently report hazards, safe or unsafe behaviours as well as an oppor-

tunity to offer suggestions and ideas for improving HSE performance at KPO. At the trial stage, new HSE Card was tested in a few departments of KPO Operations directorate. Based on the trials, an opinion survey was carried out. The positive feedback received resulted in the roll-out of the new HSE card across the whole of KPO.

A KPO wide Life Savers refresher programme was launched in 2011. The Life Savers comprise KPO's minimum expectations and requirements of safe practices relating to eight of the most

hazardous activities undertaken by contractors and employees during their work for KPO. The programme was initiated by a review and update of the basic Life Saver requirements with the roll-out of a new image and updated Life Saver booklets.

In 2011, an additional Life Saver topic, Electrical Safety, was added to the existing seven. Since the launch, the Life Savers have been rolled out on a topic by topic basis to all employees and contractors. Each roll-out pack comprises of a presentation, posters, management tour briefing cards and hazard awareness booklets.

Pictograms for each topic have been developed which comprise of pictures without words depicting the main Life Saver requirements. These pictograms printed onto boards and stickers were displayed in the work areas and provide visual guidance for any nationality.

The Life Savers programme has also been supported by computer pop-up messages and the development of an E-Learning programme which will be required to be completed by all KPO personnel to confirm a minimum level of understanding and awareness of the hazards associated with the activities and the Life Saver requirements.

Other work performed during 2011 for this element included the creation of a working group to review and improve the effectiveness and quality of Permit to Work and risk assessment processes and procedures.

In addition, a number of initiatives have been implemented in 2011 to raise health and environmental awareness of KPO and contractor employees including a fatigue awareness training programme and an Environmental Day.



# HEALTH, SAFETY AND SECURITY

## MONITORING, REVIEW AND LESSONS LEARNED

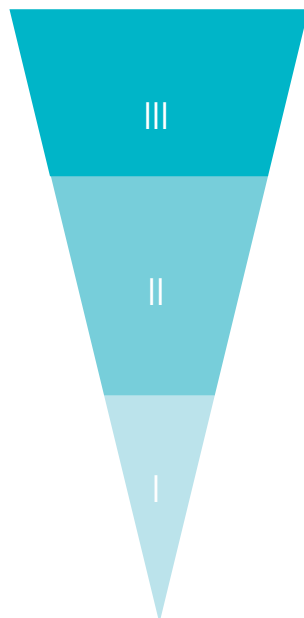
**Strategic Objective:** Effective monitoring and management review methods and processes

To improve the effectiveness and value of audit and inspection programmes, a review was conducted aiming at consolidating and rationalising the HSE audit, inspection and management tour programme for all KPO. This initiated a review of the HSE audit procedure, terms of reference, guidelines and reporting templates.

Lessons learned from High Potential and Lost Time incidents occurring during 2010 were communicated to all KPO and contractor employees during the July Safety Stand-down with supporting materials such as posters and placards being distributed to all departments.

Being a critical part of KPO's business, a number of activities and improvements were implemented in 2011 in relation to emergency response and preparedness.

Level III Crisis Management Team and Level II Incident Management Team procedures were reviewed, which included an approved KPO and Operator Crisis Management Interface Protocol and improved vertical chain of command and control between levels I, II and III for field and non field-related incidents (incident levels are detailed below). Medical Emergency Response, HR Emergency Response and Emergency Communications procedures were also reviewed and updated.



**Level III Incident:** An event that is beyond the resource capabilities of the Incident Management Team and requires activation of the Crisis Management Team to provide additional resources and support or an incident that has the potential to escalate such that there may be damage to the company reputation.

**Level II Incident:** The emergency's impact remains limited within the site but there might be a potential external impact that necessitates the use of public emergency services or resources of other organisations.

**Level I Incident:** An event that can be dealt with on site or at a location by the On-Scene Commander and / or Incident Control Team with their resources.

In order to actively assess incident potential, company's preparedness and effective response in the event of an emergency and to ensure continued and effective leadership during crisis management, Incident and Crisis Management training courses were held for crisis management and incident management teams. Specialised Crisis Communication training, public & relatives response and critical incident aftercare training was also delivered.

As part of the Emergency Response (ER) Plan, a full scale exercise "Horizon" was held in May 2011. The exercise was aimed at testing KPO's ER Procedures, Plans and facilities at all levels following a well blow-out and determining the level of readiness of KPO resources for a potential high-scale emergency with long-term aftermath including multiple casualties, environmental impact, effect on process facilities, communities, international impact, loss of assets, business and reputation. A plan for tabletop exercises including integrated level I-II sessions and level III-Operating Partner sessions was also introduced.

## ROAD SAFETY

Mitigating the risks associated with road travel remains a high priority for KPO. The remote location of KPO operations requires its employees and contractors to travel long distances to go about their work.

To improve KPO drivers' ability to drive safely, often in harsh conditions, KPO has implemented initiatives on a regular basis in the last few years. These include organisation of dedicated safe driving courses, review of safe driving observation cards by a drivers' behaviour based safety committee, implementation of mobile road patrols, and installation of in vehicle monitoring systems on all company vehicles. Road safety in the local community during 2011 was followed up through awareness campaigns amongst school children of Aksai. Initiated in 2011, construction of safety zones in Aksai schools is in the list of planned activities for 2012.

Road Safety Campaign function in one of the Aksai schools



Joint Industrial Safety seminar



Due to its importance to the company, Road Safety was added as a separate element in the KPO HSE Plan 2011 and a number of actions were implemented. These included the development of a Road Safety Code that will be issued and distributed in 2012, the update of KPO's Transport HSE procedure and other road safety procedures and a high visibility campaign of vehicle and driver document checks, some of which were performed by the Directors themselves. Other actions undertaken during 2011 include the review and revision of high risk traffic areas in the Field and subsequent activities such as road marking, pedestrian crossings, installation of speed bumps, road signs and billboards and transportation route change have been carried out. During the Contractors HSE Forum in July, road safety was a popular topic for discussion.

KPO believes all these activities have supported the reduction in the Road Traffic Incident Frequency (road traffic incidents per million kilometres driven) in 2011 from 0.09 in 2010 to 0.03.

## 2012 HSE PLAN

In 2011, KPO has worked to produce an integrated 2012 HSE Plan and will continue with the same structure as 2011, incorporating safety, environment and occupational health aspects with no requirement for separate departmental plans. Nevertheless, some departmental day-to-day activities will still require specific HSE schedules.

In 2011, to align with the KPO HSE policy the Environment was added and is now the sixth element in the 2012 HSE Plan. The focus of the 2012 HSE Plan has remained to further develop and improve all of the six elements.

- 1 HSE Leadership and Supervision,
- 2 Contractor HSE Management,
- 3 Hazard Awareness and Risk Control,
- 4 Monitoring, Review & Application of Lessons Learned,

## 5 Road Safety and Transportation,

## 6 Environment.

To ensure accountability, the 2012 HSE Plan has been structured so that each element is sponsored by a director who is supported by an element coordinator. Each element comprises of a number of objectives, and a separate task sheet is developed to describe the actions necessary to achieve each objective. The objectives in the Plan have been identified from a review of incident and audit findings and in consultation with peer groups and senior management. Individual actions, responsibilities and weighting have been developed by each coordinator and approved by relevant sponsors.

Along with the enhancement of the elements of the HSE Management System, the HSE Plan targets were also refined to ensure continuous improvement of the overall HSE performance.

## SAFETY CULTURE

KPO undertakes a number of initiatives aimed at raising occupational health and safety standards.

Raising and enhancing safety awareness and continuing to strengthen the safety culture within the organisation is an area of significant focus and effort. In November 2011, KPO held an HSE Forum attended by representatives from various KPO departments and units comprising of experienced operational workers and supervisors who deal with everyday HSE issues. The aim of the forum was to establish trustworthy and sustainable relationships between KPO employees and management to ensure efficient exchange of information, opinions and issues. At present the main communication route in KPO is by cascading information from the top downwards, whilst such forums help to facilitate two-way communication.

To evaluate effectiveness of undertaken HSE activities in the company and to understand employee perceptions of HSE, a



HSE Perception Survey questionnaire was prepared in readiness for a confidential survey targeting all levels of staff working in the organisation. The survey was piloted during the HSE Forum and Steering group meeting. Results from the final survey will be analysed and further improvement plans will be developed wherever necessary.

Outstanding HSE performance of KPO and contractor employees is encouraged in accordance with the internal HSE Awards Incentive Scheme procedure on a quarterly and annual basis. The HSE Incentive Scheme has been successfully implemented across the company for almost five years. The main purpose of this scheme is to recognise proactive leadership, innovative ideas, proactive observations and personal commitment of company and contractor employees in a highly visible manner. Outstanding HSE performance of KPO and contractor employees is evaluated as per the following four awarding categories and criteria:

- Best Individual Proactive Observation.
- Best Individual HSE Performance of KPO employee.
- Best Individual HSE Performance of Contractor or Sub-Contractor employee.
- Best Driver Performance.

In 2011, after technical evaluation and final senior management assessment 21 KPO and Contractors' employees were awarded with various prizes by the KPO General Director.

# HEALTH, SAFETY AND SECURITY



At the Integrated  
Emergency  
Response  
Exercise

## PARTNERING IN ASSET INTEGRITY AND INDUSTRIAL SAFETY

Risk management is an important activity at KPO. We adopt advanced risk analysis techniques and identify risk reduction measures for each KPO facility within the Karachaganak Field.

In 2011, KPO once again played a central role in the Kazakhstan Oil & Gas Operators Association (KOGOA). Since 2008 the association comprising operators from the oil and gas sector under the auspices of the Ministry for Emergency Situations has met to discuss process safety challenges, identify global best practice solutions and implement them in Kazakhstan to improve safety in hazardous industrial facilities. Of note, to progress the agreed key areas of co-operation the association implemented a joint industry project to develop guidelines relating to technical issues

directly impacted by RoK regulations and standards, such as risk-based inspections, inter-casing pressure, pipeline integrity, training and development.

Future developments include consideration to establish KOGOA as a Technical Committee under the existing Coordinating Council on the Development of Oil and Gas and Energy sections of KAZENERGY Association.

## OCCUPATIONAL HEALTH

Occupational Health Management in KPO is aimed at preventing occupational illness, promoting good health and wellbeing of employees and providing emergency medical support to the company. It is carried out in accordance with the RoK occupational health regulations, as well as best international practice, and comprises continuous monitoring of working environment, health risk assessment, health promotion and management of occupational and work-related illnesses.

First aid and emergency medical treatment is a licensed activity and guaranteed at four main clinics in the operating units at the Karachaganak field and in the accommodation camp. 22 doctors, 16 feldshers and 22 ambulance drivers work in four main teams plus one mobile team working at 24/7 schedule.

In 2011, 19 members of Medical staff completed mandatory Emergency Medical Course provided by a state medical institution. It is expected that another group of 19 KPO medical personnel will pass this training course in 2012. 22 Ambulance drivers passed the First Aid training course for non-medical staff provided by International SOS company.

In 2011, Medical Emergency Response Plan (MERP) was revised and tested through a number of exercises assisting KPO to identify and correct weaknesses in the system for more effective response to an emergency. Additionally, the process of

reconstruction of the new sick bay at Pilot Camp has commenced in 2011. KPC clinic is planned to work as a First Aid room for providing pre-shift medical examination.

Health risk assessment (HRA) of field-based positions has been expanded and its results are used for health surveillance and implementation of risk mitigating actions. Closure of corrective actions is ensured by the Synergi tracking system.

All field-based employees undergo mandatory preliminary and periodic fitness for work examinations; special medical check-ups and pre-shift examinations are also required for certain groups of employees such as drivers. KPO employees are not permitted to work if they have not passed these medical examinations or are deemed unable to work because of the health condition.

In accordance with the statutory requirement of the Republic of Kazakhstan, field working personnel is provided with health surveillance service maintained by a fully licensed competent medical company, which also provides services for employees covered by KPO medical insurance. In addition to mandatory check-ups, a programme of general health screening has been organised for employees who are not directly involved in field operations. These proactive measures are aimed to detect early signs of illness and to enhance the employee awareness of occupational and general health.

The fully licensed sanitary laboratory performs:

- 1 Mandatory occupational hygiene monitoring, which includes instrumental measurements of physical factors (lighting, noise, vibration, electro magnetic fields (EMF), electro static fields (ESF) and microclimate) and of workplace air pollutants (including hydrogen sulphide, carbon monoxide, nitrogen dioxide, mercaptans, mineral oils, benzene etc).



- 2 In-house inspections of catering service facilities in the Field and residential camps.
- 3 Workplace assessments including ergonomic evaluation.
- 4 Consultancy support in industrial hygiene matters.

In relation to the fact that industrial noise is recognised as a major occupational hazard, KPO has been running a Hearing Conservation Program for a few years now. Among its achievements there are detailed noise surveys (including personal noise dosimetry), noise mapping, implementation of a “buy quiet” policy, identification of risk group employees and their medical surveillance. Recommendation on additional risk reduction measures, improved warning signage and hearing protectors, increased employee and line management awareness of Noise-Induced Hearing Loss.

Only one case of occupational illness was identified in 2011 – acute H<sub>2</sub>S poisoning as a result of the March 6 incident.

An Ergonomic Assessment Program has been introduced in 2011 with the intention to evaluate non-operational workplaces with regards to office ergonomics. By completing a questionnaire, an employee can specify if his/her workstation requires an assessment. This assessment will continue throughout 2012 as well.

Two members of the Occupational Health and Hygiene section (OHH) have completed the RoK specialist training in occupational medicine and are now permitted to practice occupational medicine. The attachment to the license for medical practice has been granted. One of the doctors has received an internationally recognised qualification having completed a Diploma in Occupational Medicine training course in the UK.

The OHH section actively participated in the workplace attestations of the operational units. Eco-Centre, Bolshoi Chagan,

Ayrau Terminal and the Chemical Laboratories have been assessed in 2011. Unit 2, Unit 3 and KPC are scheduled for assessment in 2012. This is a compulsory evaluation of all workplaces in KPO with regards to occupational health and safety. Attestations are reviewed every five years or more frequently, when required (i.e. in cases of major modifications to equipment or processes).

A cardiac health promotion program has been developed in 2011. Medical records of all field-based employees have been surveyed and persons having an average risk of cardiac disease were identified. Each employee will be given an individual health improvement plan and his/her health status checked periodically to determine the effect of interventions.

## SECURITY

The security of the KPO employees and its assets plays a crucial role in ensuring safe and harmonious workplace. KPO continues to implement the policy on encouraging employees to raise concerns about noticed malpractice, anti-social behaviour and improper conduct.

Plans to upgrade and initiate technical security measures for KPO have been reviewed in line with the KPO Security Manual. Some are being implemented, such as a new badge system for KPO and its contractors which will be eventually aligned to an Electronic Access Control System. We plan to introduce other measures, including closed-circuit television (CCTV) and upgraded fencing, in due course.

KPO continues its active engagement with regards to security with communities along the main export pipeline. An absence of the illegal tap for a second successive year proves the community engagement to be an important effective tool in countering this illegal activity (detailed information on engagement with communities is provided in the respective chapter).

This year we have witnessed an increase in the cases of copper cable theft from the field which is used in earthing strips. KPO is pursuing a zero tolerance policy on individuals or contractors caught engaged in this activity. Both individuals and contractors involved will be dismissed having their contracts terminated and consequently being charged with criminal offence.

Global terrorism is nowadays a worldwide concern. It is therefore important that every KPO employee who is aware of any suspicious case reports as soon as possible to their line manager, Security department or security provider.

KPO security employees are offered with opportunities to attend special training courses aimed at enhancing their knowledge and raising professional level on a continued basis. These courses include Pipeline security, Security Management and NEBOSH Diplomas and Certificates. In 2011, a group of pipeline supervisors completed special medical training course for staff working in remote locations.

KPO's security provider, Group 4 Securicor Kazakhstan, has been the subject of KPO internal HSE incentive award for contribution to maintaining high safety performance by proactive attitude towards safety. HSE award incentive scheme applied in recognition of excellent HSE performance, as well as innovative and effective initiatives, proved to be beneficial in ensuring safer work environment and improving the safety culture at KPO.

## ILLEGAL PIPELINE TAPS

The number of such incidents has decreased in the last few years and none were reported in 2011. KPO continues to be vigilant and has improved its ability to prevent, detect and quickly repair illegal taps with a sophisticated anti-intruder system, state-of-the-art inspection technologies and an early response capability that together ensure that health of the community, environment and assets are fully protected.

# DELIVERING ENVIRONMENTAL PERFORMANCE

Delivering leading environmental performance in the technically complex Karachaganak Field is a constant challenge. KPO deploys world-class techniques and innovative technologies to protect the environment in which we operate and to contribute to global efforts tackling climate change.



Fixed Environmental Monitoring Station

Protecting the air, soil, water, biodiversity and ecosystems of Karachaganak is the main goal of our Environmental Programme. Environmental impacts are identified at the early stages of any new project through an environmental impact assessment (EIA), and a comprehensive set of monitoring programmes and prevention and mitigation measures are implemented for ongoing operations in accordance with the FPSA and applicable RoK regulations and the rules and procedures set in our Health, Safety and Environment Management System (HSE MS). KPO HSE Management System was developed in accordance with industry best practices and ISO 14001 requirements. In August 2011, KPO successfully completed Environmental Management System's recertification for compliance with ISO 14001 requirements.

Since assuming the operatorship of Karachaganak in 1997, the Contractor has invested over USD 214 million in specific environmental protection measures to improve the environmental performance of the field.

## EMISSIONS TO AIR

Within the last few years, KPO has developed and adopted a variety of innovative techniques and technologies aimed at reducing emissions to air associated with hydrocarbon production processes. Over the last three years, total air emissions decreased by about 20 per cent as shown in Chart 1.

Chart 1. Air Emissions Trends

Emissions per year, tonnes, including:	2009	2010	2011
Nitrogen oxides	1,638.5	2,205.3	1,803.0
Carbon oxide	3,316.5	2,965.3	1,199.3
Sulfur dioxide	3,635.9	3,376.4	3,635.3
Hydrogen sulfide	56.3	56.2	27.4
Other	1,942.2	1,868.8	1,846.5

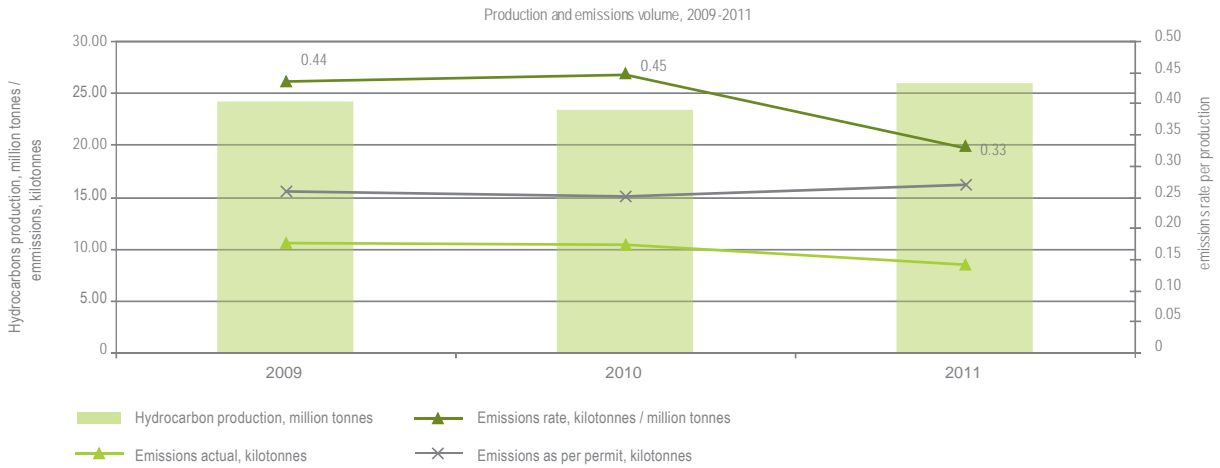
Note: Air emissions data here have been revised since previous report and are presented in accordance with approved methodology as it is specific to KPO operations and yields more precise data

The following emissions reduction measures have been successfully implemented by KPO within the period 2009-2011:

- Use of the test separators of production facilities during well testing that allows for the testing of new wells without hydrocarbons flaring.
- Installation of equipment to accept and compress flash gas from MTU-400 (Oil Refinery Company located at the Karachaganak Field close to Unit-3). In 2011, more than 47 kt (22 kt in 2010) of high-sulphur gas which would previously have been flared was returned into the process.

Over the last three years, total specific emission to air per million tonnes of hydrocarbon production decreased from 0.44 to 0.33 (Chart 2). The decrease of the emissions per unit of hydrocarbon production in 2011 in comparison with 2010 was due to the decrease in well operation activities performed in 2011.

Chart 2. Emissions and hydrocarbon production



## FLARING

Flaring reduction remains a key area of KPO's commitment to further cutting down volumes of emissions while enhancing hydrocarbon production. Although only 0.08 per cent of the total gas produced by KPO was flared in 2011 (0.13 per cent in 2010), KPO continues to look for possible ways of maintaining high levels of plant reliability and introduce further emission reduction technologies, especially in the areas of well testing and well clean-up.

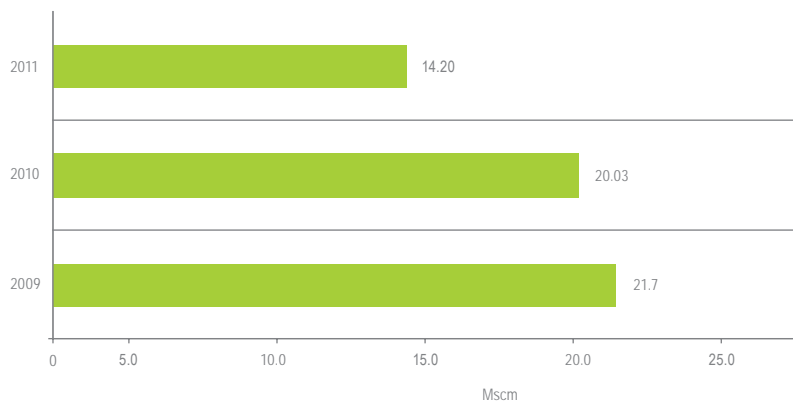
The volume of gas flared decreased by about 29 per cent (Chart 3) in comparison with 2010 (20.03 Mscm in 2010 to 14.20 Mscm in 2011).

The volume of flared liquid hydrocarbons has decreased by 48 per cent in comparison with 2010 (13.608 kt in 2010 to 7.044 kt in 2011).

In 2011, KPO completed a feasibility study related to recovering of liquid hydrocarbons during well clean-up operations. The Project is scheduled to commence in the first quarter 2012. Implementation of this initiative is expected to decrease liquid hydrocarbons flaring by 2,800 tonnes per year, which is 40 per cent of the volume flared in 2011.

Another project KPO has commenced is a feasibility study to install the equipment for recovery of Unit-2 seal gas to the production process. The realisation of this measure will enable to reduce the volume of flared gas by one million cubic metres per year.

Chart 3. Flaring volumes



# DELIVERING ENVIRONMENTAL PERFORMANCE

Mobile Environmental Monitoring Station



## AIR QUALITY MONITORING

Air quality monitoring in the Karachaganak field and in the settlements located along the perimeter of the field was ensured on the basis of the 2011-2013 KPO Production Environmental Control Programme for the KOGCF and export condensate pipeline. The Programme was designed without prejudice to the Contractor's rights to apply stabilised legislation under the FPSA and in accordance with the requirements of Chapter 14 of Environmental Code being approved by the Ministry of Environmental Protection (MEP), WKO Department of Committee for State Sanitary-Epidemiological Surveillance under the Ministry of Health of the Republic of Kazakhstan and Atyrau Oblast Department of Committee for State Sanitary-Epidemiological Surveillance of the Ministry of Health of the Republic of Kazakhstan.

Moreover, there are two mobile environmental monitoring stations (EMS) which are promptly mobilized to monitor air quality at the settlements in the event of gas odour complaints, flaring and acid treatment of wells. They are also mobilized to carry out under-flare air monitoring with consideration of wind direction near the adjacent settlements.

Eight automated Environmental Monitoring Stations (EMS) allowing continuous air quality monitoring have been installed along the KOGCF area.

Two additional EMS have been installed in Berezovka village. Installation sites were chosen by residents of Berezovka village together with representatives of the WKO Zhaik Caspian Environmental Protection department, the Akimat of Burlin region and the West Kazakhstan Branch of the Republican Hydrometeorology Centre.

Details of the air quality monitoring conducted at KPO and of the community preparedness activities are reported in the Engaging with the Communities section of this Report.

## GAS UTILISATION IN 2011

In 2011, KPO achieved a world-class gas utilisation rate of 99.92 per cent (99.87 per cent in 2010) whilst the regulatory target approved within Gas Utilisation Programme is 99.75 per cent.

In 2011, KPO produced just over 16 billion cubic metres of gas, of which:

- 7.974 bscm (47.28 per cent) was sold via Orenburg Gas Plant.
- 8.129 bscm (48.19 per cent) was re-injected into the reservoir using innovative high-pressure sour gas injection technology;
- 0.750 bscm (4.45 per cent) was utilised as fuel gas, providing energy for the process units and for the local community; and
- Only 0.014 bscm (0.08 per cent) of gas was flared, making Karachaganak the leading oil and gas condensate field in Kazakhstan for gas utilisation.

## GHG REDUCTION STRATEGY

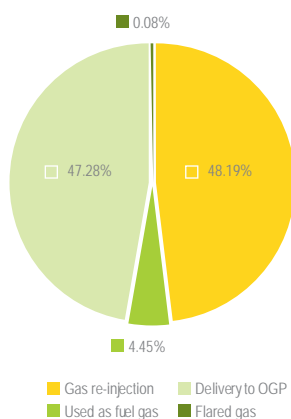
In line with the policy of the Republic of Kazakhstan and its commitment to the Kyoto Protocol, KPO has voluntarily undertaken a commitment to reducing greenhouse gas (GHG) emissions, recognised as the main cause of global warming.

KPO's GHG Reduction Strategy set the challenging objective of delivering total project reduction of one million tonnes CO<sub>2</sub>e over the period of five years. This objective has been successfully achieved in 2011. The strategy endorsed by senior management focuses on:

- Enhanced practices for operational optimisation;
- Application of best practices;
- Targeted capital investment, prioritised high-end returns;
- Promotion of essential baseline studies and formalisation of a data verification process.

Based on the methodology for CO<sub>2</sub>e emission assessment applied at the KPO Parent Companies, KPO annually calculates GHG emissions resulted from field operations. Total GHG emissions for 12 months of 2011 were 2.163 million tonnes CO<sub>2</sub>e.

Chart: Gas utilization and flaring in 2011



Total greenhouse gases (tonnes of carbon dioxide equivalent)					
Flaring	Fuel use	Other	2011 Total	2010 Total	2009 Total
100,978	1,451,927	610,770	2,163,675	1,961,614	2,042,837

Increase of GHG emissions by 10 per cent compared to 2010 is explained by the significant increase of fuel consumption at the major sources, in particular:

- Increased gas reinjection volume by 26 per cent which caused the volume increase of the fuel combusted at the Gas Turbine Unit (GTU) by 24 per cent;
- Increased electric power demand associated with Train-4 start-up which led to increase of volume of fuel combusted at Gas Turbine Power Plant (GTPP) by 7 per cent.

It should be noted that together Unit-2 Gas Turbine Unit and Gas Turbine Power Station produce up to 70 per cent of total volume of GHG generated at the KOGCF.

During 2011, KPO has continued implementing GHG management strategy and delivering its commitment to achieve CO<sub>2</sub>e reduction by one million within the period 2008-2012. In fact, in 2011 through implementation of the new and previously commenced projects focused on sustainable decrease of GHG, the company has already exceeded its set target by 23 per cent.

All GHG savings are verified annually by an independent third party. In 2011, the verification has confirmed that new measures aimed at GHG emission reduction implemented by KPO led to the CO<sub>2</sub> emission reductions by 57,621 tonnes compared to an established baseline.

Specific GHG emissions for 2011 were 83.5 tonnes of CO<sub>2</sub>e per thousand tonnes of hydrocarbons production (see chart below). Progressive reduction of GHG per thousand tonnes produced hydrocarbons has been observed within the past 4 years that shows sustainable improvement of general indicators at production units.



Hydraulic structure of Konchubai Gully

### Greenhouse gases emissions (carbon dioxide equivalent) tonnes per thousand tonnes of hydrocarbon production



In October 2011 KPO involved PI Energy Company to carry out an assessment of energy consumption by production units at KOGCF. The energy audit identified new upgrade opportunities which would enable KPO to decrease power consumption at Karachaganak field in future.

### Primary energy consumption

Primary energy consumption, 10 <sup>15</sup> J	2009	2010	2011
From non-renewable sources, primarily natural gas	5.29	5.47	6.24

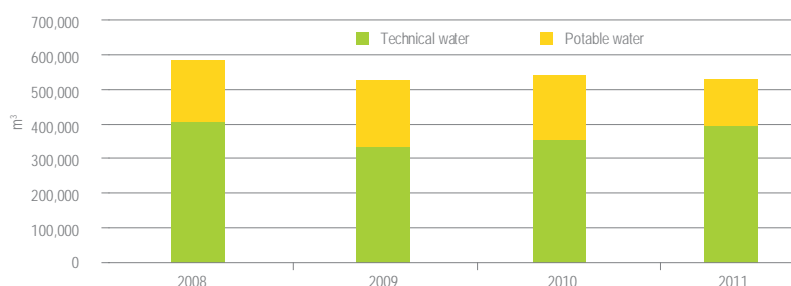
Note: primary energy consumption data for previous years are corrected due to identified errors in calculation.

### WATER

Conservation and rational use of water resources is a critical and high-priority task set before the entire humanity as the water is not just industrial feedstock but, more importantly, is a primary source of life. KPO strives to optimize its consumption of fresh water by conservation of water resources and recycling where possible.

In 2011, the KPO's internal procedure for water consumption and discharges at the KPO operational sites has been updated. This procedure allows for the effective management of issues related to rational use of water resources in the field, and also complying with the established limits and water use schedules.

### Water consumption



Surface and subsurface water sources are monitored to verify water quality, documenting water stream movement, potential pollutant migration and conformity to the sanitation and hygienic standards in force.

# DELIVERING ENVIRONMENTAL PERFORMANCE

## Water supply sources 2011

m <sup>3</sup>	Zharsuat water intake	Konchubai Gully water intake	Serebryakovsky water intake (Bolshoi Chagan)	Kigach water intake (Terminal Atyrau)	Total 2011	Total 2010	Total 2009
Total water use by source					527,062	539,121	527,076
Technical water	0	390,912	226	1,284	392,422	354,189	334,317
Potable water	132,446	0	1,339	855	134,640	184,932	192,759

Volume of reused water	2011		2010		2009	
	m <sup>3</sup>	%*	m <sup>3</sup>	%*	m <sup>3</sup>	%*
	142,889	36	40,093	22	42,762	22

\* Per cent of water volume for technical needs at Karachaganak Field.

## Water discharge in 2011

Destination	Treated wastewater to field holding ponds	Treated wastewater to Atyrau holding pond	Storm run-off to adjacent steppe	Total 2011	Total 2010	Total 2009
m <sup>3</sup>	112,054	855	17,792	130,701	135,968	139,270

## TECHNICAL WATER

The major source of water supply for operational needs in Karachaganak field is a pond of technical water at Konchubay gully. The 2011 water intake has totalled 390,912 cubic metres, which is 74 per cent of the 2011 limit of 528,280 cubic metres established by the RK Special Water Use Permit.

The water intake for technical purposes of Bolshoi Chagan and Atyrau Terminal in 2011 totalled 1,510 cubic metres which is 44 per cent less compared to 2010.

In order to reduce fresh water intake the Company makes the required efforts and strives to re-use and recycle treated effluents for technical needs. Thus, in 2011 the company continued working in this direction:

**1** As a result of actions taken, the volume of treated wastewater reused for preparation of drilling mud for well operations, trees irrigation, dust sup-

pression and hydrotesting in 2011 totalled 142,889 cubic metres.

**2** In order to improve the wastewater treatment quality the works on Phase II of Upgrade of treatment facilities for domestic and oily wastewater at KPO production facilities are continued. State expert review conclusions have been obtained for all detailed design projects, the equipment required to implement the design solutions is being purchased.

## POTABLE WATER

The source of potable water supply in Karachaganak field is the Zharsuat aquifer. The Zharsuat water is used for domestic needs only. The volume of KPO's water use for domestic needs for 2011 has totalled 134,640 cubic metres; which is 28 per cent less compared to 2010. Such reduction has become possible thanks to the company's

efforts to rationally use water, and included the following steps:

- Water use rationalization;
- Monitoring and complying with the limits and water use schedules internally established and approved by the Republic of Kazakhstan Regulatory Bodies;
- Maintenance of water facilities and technical devices in operating condition, scheduled maintenance of water line and fittings with the aim to prevent loss of water through the leaks;
- Keeping records and timely reporting on the use of water resources.

In 2011, the total amount of waste generated at KPO facilities decreased by 6 per cent with reference to 2010, totalling 49,399 tonnes.



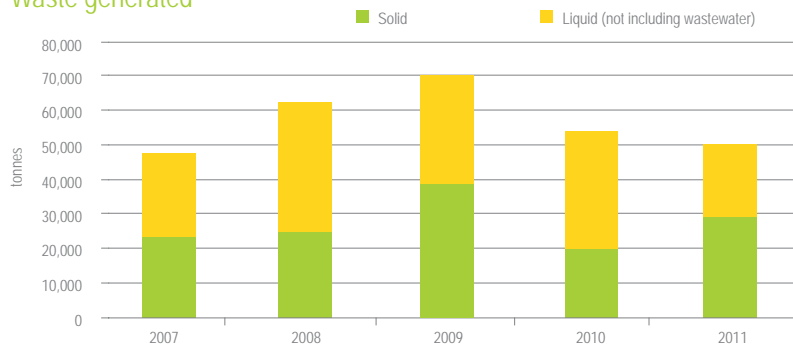
KPO Eco centre

## WASTE MANAGEMENT

The reduction of the number of drilling rigs down to one in 2011 led to decrease of liquid and solid drilling waste.

The cleaning of territories from construction wastes resulted in increase of the amount of solid waste in 2011. 17,323 tonnes of construction waste were handed over to the sub-contracting company for further placement at the municipal solid waste landfill.

### Waste generated



Processing and recycling of bulk waste is carried out at the Eco Centre. Karachaganak Eco Centre is a world class complex for recycling, treatment and disposal of drilling fluids, drilling and production waste in an environmentally friendly way. The Eco centre consists of the following units:

- thermo-mechanical cuttings cleaning (TCC) facility, which enables the safe and efficient treatment of oil-based mud cuttings;
- liquid mud plant (LMP), the processing facility for mixing and treating drilling oil based mud (OBM);
- liquid treatment plant (LTP), which treats hydrocarbon contaminated water, recycles brines used for work-over operations and reconditions water-based mud used in top hole drilling operations; and treats and sends to KPC waste liquids to be injected into dedicated disposal wells;
- Rotary kiln incinerator (RKI), which is used to process oil-contaminated soil and materials other than drilling cuttings;
- New landfill waste polygon site com-

missioned in December 2011;

- New general purpose incinerator (GPI) to be commissioned in second quarter 2012;
- Waste segregation facility is in progress. Completion is planned in 2012.

KPO is able to recover and reuse expensive base oil, which composes 65 per cent of the oil-based mud, and to separate base oil and water from cuttings, thus reducing the hazardous characteristics and the volume of solid waste deposited at the storage site. In 2011, 12,297 tonnes of spent drilling mud and brines were recycled and 639.64 tonnes of base oil was recovered and reused in ongoing operations. The recovered base oil was used to prepare new oil based mud (OBM).

Start-up of the general purpose incinerator (GPI) is underway. When in operation, the GPI should make it possible to reduce the volume of municipal waste disposed to landfill by up to 95 per cent.

The new waste landfill site was constructed adjacent to the Eco-Centre. Industrial waste will be buried at the landfill post treatment. The new landfill complies with

# DELIVERING ENVIRONMENTAL PERFORMANCE

all requirements for safety and protection of environment. A total of seven cells have been completed in 2011 and been put into operation.

The old field waste polygon site (FWPS) is located in the southern part of Karachaganak Field circa 10 km from the Eco Centre. Waste which currently stored in four cells of the FWPS will be removed to the new landfill, however laboratory studies will be first carried out to confirm the hazard class

and ensure compliance. The FWPS will be decommissioned and all remediation works will be done after the cells are emptied.

KPO plans to complete the new waste segregation facility in 2012: the equipment and internal facilities are currently at design completion stage and the building itself is complete with equipment to be added. This facility would enable municipal waste to be segregated into waste streams which would allow recycling and reducing the total

amount of waste sent to the landfill. Target waste streams for recycling are plastic, glass, metal paper, packaging cartons, and wood and rubber products.

Table 1 below provides the details on solid and liquid waste generated and disposed in 2011 with comparison to 2010 and 2009. Table 2 sets out the total volume of waste treated at the Eco Centre's waste treatment facilities during 2011.

Table 1. Solid and liquid waste generated and disposed (tonnes)

Waste type	2011 Disposal method				Generated in 2011	Generated in 2010	Generated in 2009
	Recycled	Landfill	Third party contractor	Stored on site			
Solid waste	294	21,303	553	6,556	28,707	19,777	38,919
of them:							
solid waste after thermomechanical treatment (TCC unit)		1,336		3,390	4,726		
solid waste after thermal treatment (RKI unit)		37		1,311	1,348		
well operations waste		34		926	961		
municipal waste		2,271			2,271		
construction waste		17,323			17,323		
other	294	302	553	929	2,078		
Liquid waste (not including wastewater)	19,667	0	142	882	20,692	32,820	30,351
of them:							
spent water-based mud (WBM)				403	403		
spent brine				94	94		
spent drilling mud and brines recycled at the Liquid Mud Plant and Liquid Treatment Plant	12,297				12,297		
other	7,370		142	385	7,898		
Total					49,399	52,597	69,270



Table 2. Waste treatment at Eco Centre

Waste treated	Volume (tonnes)
Drilling cuttings (generated at the rig sites)	8,145.7
Spent drilling mud and brines recycled at the Liquid Mud Plant and Liquid Treatment Plant and sent to rig sites for well drilling	12,297
Liquid waste recovered from the drilling process and recycled at the liquid treatment plant (LTP)	7,362.8
Treated solid waste from drilling and production process treated at the rotary kiln incinerator (RKI) to remove hydrocarbons prior to disposal.	1,154.4

The following projects are ongoing:

- Scientific and research project “Searching for the alternatives to dispose the domestic wastewater sediments” has been completed in 2011. At this stage the subsequent report on the project is being reviewed internally at KPO for economical evaluation of the selected method;
- Study on all legacy waste in cells of the FWPS with a plan to dispose of contents being developed.

As part of the obligation to collect and recycle waste paper, in December 2010 KPO successfully launched a pilot project to collect waste paper for further recycling. Since then 22,820 kg of waste paper and cardboard have been collected from several KPO office buildings. Thus, the volume of municipal solid waste taken out to Ak-sai city’s landfill was reduced by over 22 tonnes. In the first quarter 2012, KPO plans to ship the first carload with waste paper to a cardboard and tar paper plant.

In addition to reducing paper consumption the paper recycling project contributes to waste paper segregation at source by KPO staff. In 2012, KPO plans to implement the project in all company’s offices, increase awareness of employees regarding the need to collect paper correctly. Training for vendors on the subject of how to sort waste correctly is also scheduled to be conducted.

### BIODIVERSITY AND ECOSYSTEMS

Biodiversity conservation is one of the most critical elements of economic, environmental and political programmes. In view of signing a number of international Agreements (Convention on Biological Diversity, Cartagena Protocol) many countries initiated special scientific researches on biodiversity conservation and restoration as it is a key step in ensuring efficient functioning of the ecosystem.

KPO has not remained indifferent to this issue as the KOGCF is a habitat of a many species of flora and fauna some of which are included into the Red Book of Kazakhstan.

In 2010, KPO conducted the research study on biodiversity conservation. The scope of these researches covered Biodiversity baseline survey and impact assessment of industrial activities performed at the field.

On the basis of the outcomes of the researches, in 2011 KPO has developed a draft of Biodiversity Action Plan (BAP) and Biodiversity Standard (strategy). The next step toward biodiversity conservation and restoration will be to implement the above mentioned BAP and the standard.

### SPILLS

In 2011, two minor hydrocarbon leaks and one chemicals leak on the ground were recorded at KPO. None of them exceeded 15 litres in volume. Other spills and leaks occurred in 2011 were contained within the secondary containment systems and did not result in the environmental damage.

### GRYPHON AREA REMEDIATION

Activities on biological remediation of the disturbed lands at Gryphon area were completed in November 2011; the total reinstated area covered 49.1 hectare.

In 2012, KPO plans to handover the reinstated land of the Gryphon area to the state ownership.



# INVESTING IN OUR PEOPLE

Developing and operating the Karachaganak Field requires thousands of dedicated and talented employees in a wide range of disciplines, from petroleum engineers and technicians to accountants and logistics specialists. Our people are the key to our success. We invest massively in the development of our national workforce using the international expertise of our partners in the venture, appropriate classroom training and renowned educational institutions.

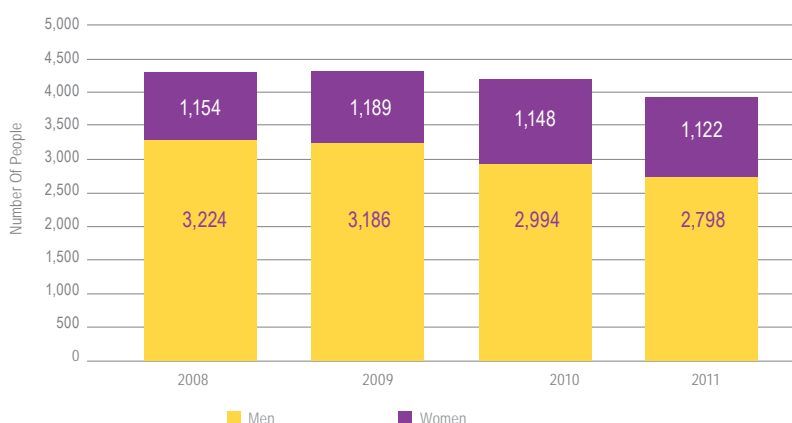
As of end 2011, 3,920 employees worked at KPO, of which Kazakhstani nationals constituted 3,673 people, and expatriates – 247. During 2011, the number of expatriate and national staff decreased by more than 200 people as capital projects, such as the fourth liquid stabilisation train at KPC, Unit 2 Materials Replacement and Uralsk Gas Pipeline Projects were completed, and the number of staff working in the Project Development Directorate was reduced. KPO avoided reduction of national staff: 78 employees from these projects have been redeployed to other KPO departments. In 2011, the Project Development Directorate was moved from London to Kazakhstan, in order to further enhance the effectiveness of the KPO organisation in its liaison with the technical authorities.

## KPO WORKFORCE



In terms of gender split, 2,798 male and 1,122 female employees worked at KPO in 2011. The data on the gender split for the 2011 and previous years is shown below.

## KPO EMPLOYEES BY GENDER



KPO employees successfully completed training on certified management programme in 2011



## COMPENSATION AND BENEFITS

During 2011 KPO has continued the compensation activities aimed at improvement of recruitment, retention and motivation of its national staff.

KPO reviews the salaries of its personnel on an annual basis. In 2011, the process of salary review included the following:

- 10 per cent Cost-of-living increase applied on 1<sup>st</sup> March 2011,
- Individual upgrades and salary increases,
- Performance bonus (80-160 per cent of monthly base salary depending on results of the appraisal),
- Market based pay adjustment of key technical staff in core business departments.

Additional bonus in amount of 100 per cent of the monthly base salary was paid in December in celebration of the 20<sup>th</sup> anniversary of the Republic of Kazakhstan's Independence.

Fringe benefits are an important part of the employment package and consist of financial and non-financial elements. The benefits provided in 2011 included:

### Financial benefits:

- Year-end bonus (100 per cent of base salary),
- One time payment for health recovery (100 per cent of base salary),
- Bonus on the RoK Oil and Gas Worker's Day (100 per cent of base salary),

- Cash benefit for a child birth,
- Financial aid to deceased employee's family (12 months base salary and a material aid for the funerals),
- Financial aid in case of death of employee's family member,
- Financial aid in case of death of a KPO pensioner,
- Social help to KPO pensioners.

### Non-financial benefits:

- Medical insurance for employees and their family members,
- Grants for education of KPO employees,
- Sanatorium-and-spa treatment for KPO employees and their family members (spouses and children),
- Transport to work and back, free meals for employees who work in the field.

## TRAINING AND DEVELOPMENT

KPO offers an extensive training and development programme aimed at:

- ensuring that employees meet the competency (skill, knowledge) requirements in order to do their jobs effectively;
- developing employees to be able to take on larger roles with more responsibilities within the organisation, and supporting talented and motivated persons to fill critical positions.

In 2011, 198,130 hours of training was delivered to KPO national staff (an average

of 18.1 hours of training per attendant). In terms of average expenditure, this corresponds to USD 877 per attendant spent on training and development in 2011.

We apply individual approach to the needs of employees in training and development, offering custom development activities including vocational in-role training, assignments to parent companies and opportunities for external training for new skills and qualifications.

Such an approach requires a continuous evaluation of development needs across the business, but it enables us to tailor development plans to the specific needs of an individual in a specific company area, thus maximising results. This also ensures a robust control over the implementation of the training and development plan and the use of the training and development budget, and enables fair and efficient monitoring of the employee's improvements in effectiveness and competence. The most widespread approach in the company is the use of short- and long-term training courses aimed at providing employees with professional skills they need to do their job.

## COMPETENCY MANAGEMENT SYSTEM DEVELOPMENT

Competency Management System is being developed to manage development process of personnel as a whole. The system provides the following benefits to KPO:

- confidence that the level of competencies of employees complies with the established standards;

# INVESTING IN OUR PEOPLE

- clear understanding of current and future training and development needs for staff;
- full engagement of line-managers and employees in the process of development of the Competency Management System;
- differentiated process of performance assessment and training and development needs analysis.
- Providing a workforce with the skills, knowledge, and experience to carry out their tasks safely, efficiently and consistently;
- Improvement of staff performance and motivation;
- Tools to support staff development within the organization;
- Reduction in severity and frequency of incidents and accidents;
- Improvement of production results.

A robust Competency Management System will provide real and lasting benefits to KPO, its employees and the Republic of Kazakhstan. These benefits include:

The implementation of the nationalization programme requires competent staff

capable to occupy managerial and expert roles. Introduction of the CMS constitutes a significant step in implementation of KPO's training and development tools.

Apart from competency models for non-technical jobs, 138 technical standards have been developed specifically for KPO, and National Assessor training is in progress to provide internationally qualified personnel to apply these standards. Over 13,000 assessments (22,600 assessments including HSE Life Savers) are scheduled to perform within the next two years.

The KPO vision for the Competency Management System is to achieve OPITO accreditation. To this end KPO is at present applying for OPITO approval of its overall Competence Management System (CMS). If this approval is granted KPO would be the first Oil & Gas Production Company in Central Asia to obtain OPITO certification and only the fourteenth worldwide.

In addition to the CMS implementation, KPO has been training its national personnel on an ongoing basis to be accredited with the internationally recognised OPITO Assessor Qualification. In 2011, 75 national employees of Production & Maintenance Department have been trained. 42 out of 75 have successfully gained the Competence Assessor Award International Certificates from the OPITO Oil & Gas Academy.

Another facet of training and development at KPO is the expansion of opportunities to attend internationally certified programmes. KPO general strategy depends on the introduction of international practices and technologies. Employees not only need to possess the skills required to operate new equipment or work with new technologies, but also to acquire the advanced knowledge required by the industry at the international level. Besides production-related needs, programmes are also instrumental in personal development, staff motivation and retention.



KPO employees successfully completed training on certified management programme in 2011



Meeting of KPO and RoK Trade Union Federation representatives

### KPO SCHOLARSHIP PROGRAMME

Since 2003, KPO has supported talented students from Kazakhstani universities who have chosen a field of study related to the oil and gas industry. Scholarships are advertised at the universities, and a dedicated internal KPO committee evaluates applications. In 2011, 15 students were granted with scholarships worth USD 3,000 each. To date, 145 students have received scholarships from KPO.

Scholarships are also offered to KPO employees and their children as a means of supporting their desire to advance their education. In 2011, 18 employees and 50 children of employees received scholarships from KPO for a total of USD 238,000. Since the start of this programme in 2002, 113 employees and 256 children have received scholarships totalling USD 1,058,976.

### EMPLOYEE RELATIONS

At KPO the rights of workers to associate and collectively negotiate working conditions are fully respected. Employees working in KPO are represented by two Trade Unions working under the Collective Agreement signed between KPO and the Trade Unions. The Collective Agreement provides a framework under which issues addressed by employees and Trade Unions are discussed. The Collective Agreement covers a number of social benefits provided by KPO to its employees. Those benefits are described above in the Compensation and Benefits subsection.

The Collective Agreement is applied to all KPO employees irrespective of their membership in the Trade Unions. Terms and conditions of the Collective Agreement are reviewed regularly, which in practice is not less than every two years.

KPO is a complex organisation which employs personnel of various nationalities and cultures. The core principles, values and behaviours that govern how KPO conducts its business have been reflected in the Code of Conduct.

# CONTRIBUTING TO ECONOMIC DEVELOPMENT

Maximising the value of the Karachaganak Field to Kazakhstan means more than generating revenues and taxes through oil and gas production – it means forming long term, durable partnerships for economic development.

## LOCAL CONTENT LEGISLATION AND REPORTING

Acknowledging the policy of the approved legislation on Local Content, KPO has sought to accommodate such policy to the extent compatible with the FPSA and has reflected the new policy and definitions regarding the unified methodology in its internal documentation and reporting system.

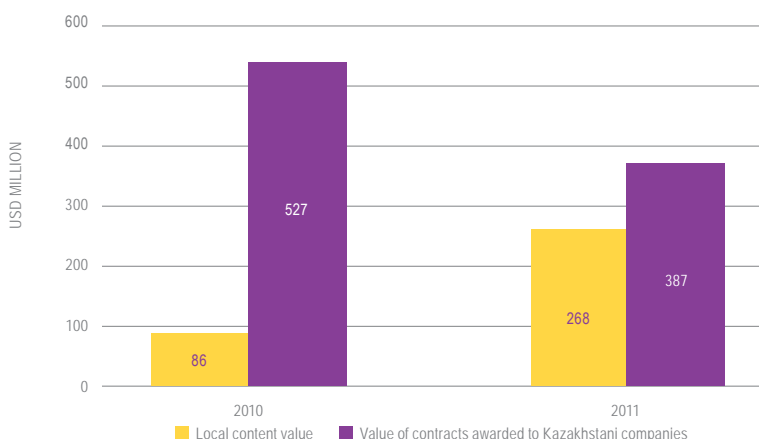
Without prejudice to the Contractor's rights in relation to stabilised legislation under the FPSA, in order to accommodate to the extent reasonably possible the new legislative acts on Local Content Development and to create a favourable business environment for regional enterprises, in 2011 KPO has issued annual, medium and long-term programmes for purchase of goods, services and works. The information on these programmes is provided to the RoK Ministry of Oil and Gas on a regular basis and posted on the KPO website.

To assure effective reporting on local content, KPO has continued organising training on the single Methodology of calculation for its vendors throughout 2011.

## SUPPORTING KAZAKHSTANI BUSINESSES

It is essential for KPO to sustain continued development of local companies, enhancing their capacity and competence in order to comply with international standards and meet the requirements of the oil and gas industry. In line with these requirements, KPO actively provides assistance to local vendors in developing their key staff through international qualifications in HSE, finance and project management.

In 2011, KPO awarded contracts worth over USD 387 million to 341 Kazakhstani companies for the provision of goods, works and services. In 2011, the Kazakh Content in Karachaganak project made up to 38 per cent (USD 268 million as shown below).



The systematic application of pre-qualification criteria and the results of market research are applied to identify Local Content Development projects, be that vendor development projects, strategic infrastructure investments, skills training programmes or access to financial markets.

Implementing its Local Content Develop-

ment Programme KPO launched a Project on allocating goods and services manufacturing for companies based in the Western Kazakhstan Oblast. This project is aimed at development of local manufacturing of goods and materials demanded on a long-term basis in the oil and gas industry.

The project was designed taking into ac-

count the results of KPO's needs review for goods and services and the national market research. It is expected that the project will help define the local capability and potential of the local manufacturers for their further development. The objective is to produce a strategic plan for development of local targeted commodity manufacturing through phased execution.



At the joint forum "Original Equipment Manufacturing and Spare Parts"

Another project determined to enhance economic development of the region with support of KPO is the Aksai Industrial Park inaugurated in June 2011. The project is primarily aimed to attract international investors and stakeholders to the West Kazakhstan Oblast for developing their products and services in collaboration with local companies.

As regional businesses are mainly concentrated on small-scale engineering and procurement services, the key project objective is to make an effective "know-how" transfer from international first-tier companies to Kazakhstani enterprises feasible and to stimulate economic growth of industrial sector of second generation in Aksai.

By providing foreign investors with the complex of facilities and services of the highest quality, the project is intended to support the development of the regional business infrastructure. In 2011, five local companies involved in the project have started the implementation of ISO 14001 and OHSAS 18001 standards with KPO assistance.

In May 2011, the Kazakhstan Association of Oil and Gas Energy Complex Organizations KAZENERGY, the JSC NC KazMunaiGas, and three major oil and

gas operators working in Kazakhstan – Karachaganak Petroleum Operating B.V., North Caspian Operating Company B.V. and Tengizchevroil LLP – organized a joint Forum in Astana under the headline "Original Equipment Manufacturing and Spare Parts" in order to ensure continued support to development of the internal market for production of goods and services required in the oil and gas sector and to encourage the establishment of business partnerships between local and foreign companies in Kazakhstan.

The main topics discussed at the Forum involved contribution to development of domestic manufacturing of original equipment and spare parts, perspective view on development of Kazakh Content and running business in Kazakhstan.

About 40 Kazakhstani machine-building and engineering companies and more than 50 foreign manufacturers took part in the Forum, as well as representatives from the RoK Ministry of Oil and Gas, the RoK Ministry of Industry and New Technologies, Akimats of the Western Kazakhstan, Mangystau and Atyrau oblasts.

The Forum facilitators provided reviews of the Karachaganak and other Kazakhstan

oil and gas fields and familiarized the participants with the needs for original equipment and spare parts in short-term as well as in medium-term perspectives. The supply companies which attended the Forum were also presented with information on operators' requirements to pre-qualification, local content and equipment specifications.

### INVESTING IN LOCAL PEOPLE

Workforce nationalisation is a crucial building block in the creation of KPO's economic legacy, maximising the number of local employment opportunities and investing in the workforce of Kazakhstan. We have met the targets set in the FPSA and continue to work towards new benchmarks for the next 10 years that will see a Kazakhstani management team steering the future course of Karachaganak.

The KPO nationalisation strategy is closely linked to the main strategy of the company. In order to deliver on nationalisation targets, while at the same time improving organisational capabilities particularly in the area of management, the strategy relies not just on the development of knowledge and technical skills, but in the overall management capabilities and experience of the individuals involved.

# CONTRIBUTING TO ECONOMIC DEVELOPMENT

In 2011, 11 additional senior positions at KPO were nationalised. At the end of 2011, local employees filled all of the venture's skilled and clerical positions and 95 per cent of professional and supervisory roles. At the managerial level, 69 per cent of positions are filled by local employees.

Recognising the critical importance of development of national employees, KPO has established an approach for transitioning the most talented Kazakhstani nationals into an increasing number of business critical managerial roles.

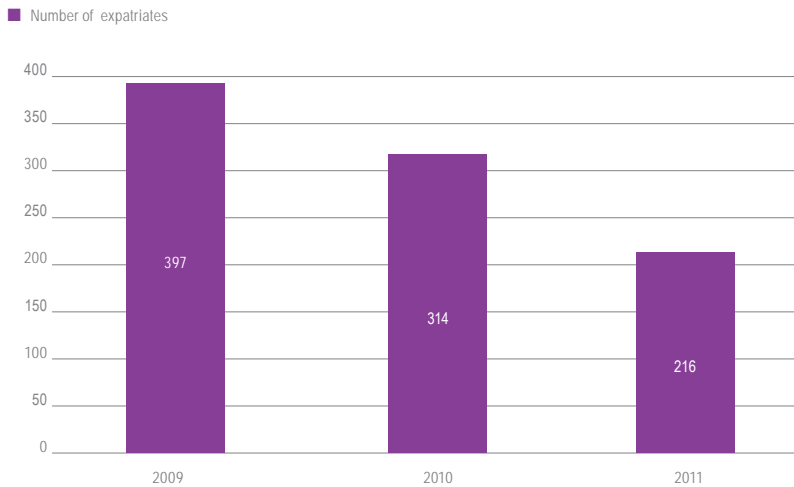
The strategic approach of HR towards the nationalisation process is based on the effective planning and implementation of training and development process rather than the mere replacement of expatriate personnel with Kazakhstani staff. This will in its turn ensure that all KPO operations are carried out at the highest level and in accordance with international standards. This allows KPO to meet business objectives with the highest possible level of quality. Given the company management focus on Category 1 Nationalisation and our commitment to reach 70 per cent, KPO introduced a program aimed at the enhanced development of Kazakhstani staff. Its aim is to identify KPO's high potential national staff, develop them to their full potential in a defined time frame and to report on progress against measurable targets.

New targets set in the next Nationalisation Plan include:

Category	Description	2011	2018 Plan
1	Management	69%	70%
2	Professional staff and supervisors	95%	95%
3	Technical staff	100%	100%
4	Support and clerical staff	100%	100%

The chart 1 below shows the decrease of expatriate workforce in core organisation from 2009, the implementation of the new Nationalisation Programme:

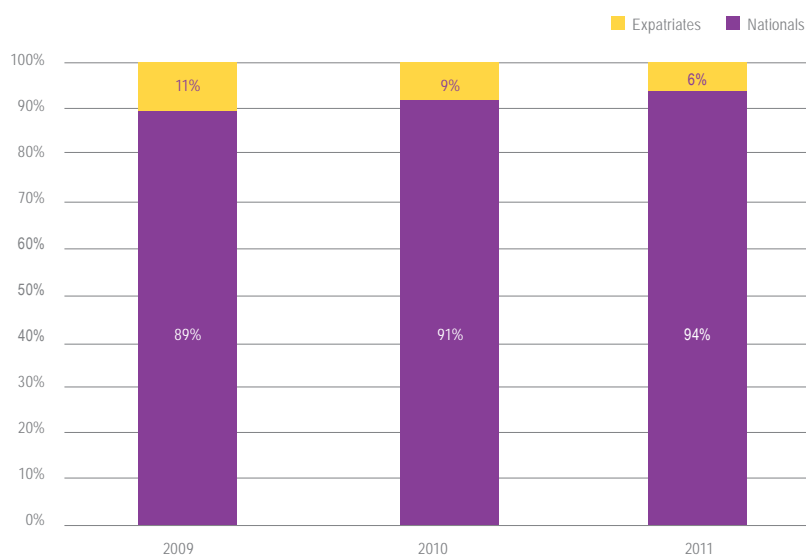
Chart 1





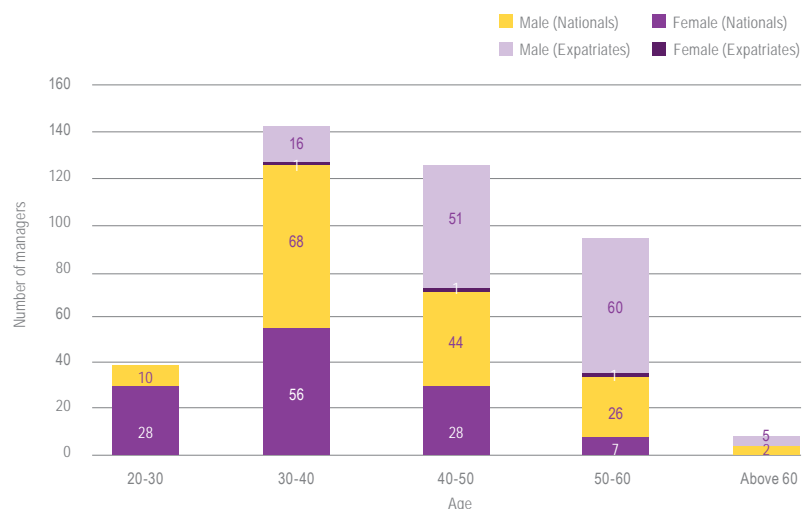
The chart 2 presents the share of the KPO national workforce against the expatriate personnel in 2009-2011.

Chart 2



The overall number of managers both expatriates and nationals split by age and gender is reflected in Chart 3.

Chart 3



### CONTRIBUTING TO MAKING ENERGY AVAILABLE FOR REGIONAL DEVELOPMENT

The Uralsk gas pipeline construction project was successfully completed in 2011. Commissioning of the gas pipeline has enabled increasing the gas supply to such major consumers of gas as Uralsk and Aksai towns where outdated Automatic Gas Distribution Stations (AGDS) have been replaced and supply gas pipelines built. For the first time this project has

provided access to environmentally cleaner fuel for more than one hundred thousand residents of five WKO districts where no gas supply system has existed before.

This achievement is significant both from economical and social perspectives since not only does it represent the tangible result from the co-operation between the Republic of Kazakhstan and the Karachaganak Partners, but it is also a powerful incentive for the continued development of the region.

The Uralsk gas pipeline is an important social project, which contributes to the development of Kazakhstan's domestic gas market, as well as encourages further industrial growth by delivering much needed energy to communities within the Western Kazakhstan Oblast.

Construction of the pipeline had been agreed by the Karachaganak partners, the Republic of Kazakhstan and the Western Kazakhstan oblast authorities, and a Memorandum of Intent was subsequently signed in the presence of the President of the Republic of Kazakhstan Nursultan Nazarbayev.

Part of gas extracted at Karachaganak and electric power produced by KPO are delivered to the local market, thus contributing to a secure energy supply in the region. Gas is also provided for electric power generation at KPC Gas Turbine Power Plant and its subsequent delivery for West Kazakhstan Oblast customers. Though providing capacity to power generation was set in the FPSA, KPO voluntarily agreed to expand delivery of gas for power to fulfil local demand and is currently one of the major power suppliers to the WKO. The total volume of sweet gas supplied in 2011 was 130.895 Mscm.

As for producing electric power, in 2011 KPO Gas Turbine Power Plant produced additionally 378,202.4 MWh of electric power, which was supplied to the country's national grid.

# CONTRIBUTING TO ECONOMIC DEVELOPMENT

## SUPPORTING SOCIAL INFRASTRUCTURE

Under the terms of Annex 5 to the FPSA, from 1998 until 2009 KPO provided USD 10 million per annum to the development of social infrastructure projects identified by the West Kazakhstan Oblast Akimat in accordance with social development priorities. These projects mostly take place in the regional capital, Uralsk, and include building schools, nurseries, hospitals and cultural and sporting facilities.

In 2009, the RoK Government and KPO Joint Operating Committee adopted a Resolution doubling the amount of funding for social and infrastructure projects, from USD 10 million to USD 20 million.

KPO receives a list of the projects set by the WKO Akimat and the JOC and manages the design, contracting, project ma-

nagement and delivery of the works, which are then handed over to the Republic of Kazakhstan. All social projects are realised by Kazakhstani companies.

In 2011, KPO completed construction of heating networks from the constructed 54 MW Gas Turbine Station in Uralsk, construction of water pipeline Aksai-Akbulak, reconstruction of Boiler house in micro-district 10 of Aksai, construction of music school in Zhympty village of Syrymskiy district and overhaul of school in Priuralny village of Burlinskiy district.

Also in 2011 KPO initiated construction of the following projects: construction of celebration palace in Uralsk, construction of school for 1200 children at Samal street of Uralsk, construction of school in Aksuat village of Akzhaik district, construction of School in Koneketken village of Terekta district, reconstruction of school workshop

in Zharsuat village of Burlinskiy district, construction of School in Saikuduk of Akzhaik district, construction of School in Ushagash of Terekta district and reconstruction of School in Uspenovka village of Burlinskiy district.

## Social and infrastructure projects implemented in 2011

Social Projects in Uralsk*		
Construction of	Project Description	Budget allocated in 2010 – 2011 (Million USD)
Heating networks from the constructed 54 MW gas turbine power station in Uralsk  <i>Completed</i>	This project is a part of Industrial Development Programme of the Oblast. The heating lines will provide heating supply to residential areas of Uralsk and should prevent heating supply shortages in Uralsk. The project includes replacement of old heating lines in order to provide proper and safe operation of old / existing heating lines during heating season.	13.3
Celebration Palace in Uralsk  <i>Ongoing</i>	In order to improve capacities in Uralsk for conducting festive events it is planned to construct a building complex following modern architectural requirements, sanitary and construction norms. The Celebration Palace will be one of the symbols of Uralsk.	8.3
Total		21.6

\* Projects were commenced in 2010.

Social Projects in Burlin Region		
Construction of	Project Description	Budget allocated in 2009 – 2011 (Million USD)
Water supply line Akbulak-Aksai <i>Completed</i>	Water Supply line 42 km in length has been built in order to provide potable water for the houses in Aksai. In the framework of the project it is also planned to install 2 water tanks 500m <sup>2</sup> each, UV unit and pump stations	5.27
Boiler House in microdistrict 10 of Aksai <i>Completed</i>	This project will improve heating supply to microdistrict 10 of Aksai	1.17
Repair of Sovetskaya Street of Aksai <i>Ongoing</i>	The project is aimed to improve condition of motor road and sidewalks at Sovetskaya street of Aksai	1.4
Repair of central boiler house in Aksai <i>Ongoing</i>	The project is aimed to improve heating supply to microdistrict 10 of Aksai. The project includes supply and installation of a new boiler, internal repair of boiler house	1.06
Total		8.9



KPO delegation's visit to the secondary school in Priuralnoye village upon completion of its reconstruction

# CONTRIBUTING TO ECONOMIC DEVELOPMENT

Social Projects in Uralsk		
Construction of	Project Description	Budget allocated in 2010 (Million USD)
Tennis complex in Uralsk <i>Ongoing</i>	The tennis complex is a two-storey building that will consist of three indoor and two outdoor tennis courts including stands with seats for 300 spectators.	6.0
School for 1,200 children in Uralsk <i>Ongoing</i>	The school is a three-storey building located at Samal street of Uralsk. The building of the school consists of five blocks to accommodate 1,200 pupils in 48 classrooms, including a cawnteen, an infirmary, a conference room, a gymnasium, an amenity block and a library. The school will be fully furnished and equipped to hand over on a turn-key basis.	10.3
Kindergarten for 320 children in Uralsk <i>Ongoing</i>	The kindergarten is a two-storey building that will accommodate 320 children (16 groups) including 16 playgrounds with shelters and game equipment, an area for physical training and a garden. The building will be fully equipped and furnished to hand over on a turn-key basis.	3.7
Total		20.0

Social Projects in WKO		
Construction of	Project Description	Budget allocated in 2010 (Million USD)
School in Aksuat <i>Ongoing</i>	The School is aimed to accommodate 198 children from Aksuat village of Akzhaik district. The school will be fully furnished and equipped to hand over on a turn-key basis.	2.9
School in Saikuduk <i>Ongoing</i>	The School is aimed to accommodate 198 children from Saikuduk village of Akzhaik district. The school will be fully furnished and equipped to hand over on a turn-key basis.	2.9
School in Koneketken <i>Ongoing</i>	The School is aimed to accommodate 198 children from Koneketken village of Terekta district. The school will be fully furnished and equipped to hand over on a turn-key basis.	2.9
School in Ushagash <i>Ongoing</i>	The School is aimed to accommodate 108 children from Ushagash village of Karatobe district. The school will be fully furnished and equipped to hand over on a turn-key basis.	2.65
Potable water supply to Beryozovka <i>Ongoing</i>	The project is aimed to provide potable water for residents of Beryozovka village of Burlinskiy district.	2.0
Total		13.35

Social Projects in WKO		
Construction of	Project Description	Budget allocated in 2011 borrowed from 2012 (Million USD)
Motor roads in Uralsk <i>Ongoing</i>	Construction of 1.5 km of city motor roads.	1.3
Outpatient clinic in Bisen <i>Ongoing</i>	The outpatient clinic in Bisen village of Bokeiorda district is aimed to improve quality of medical support provided for the residents of this distant village.	1.0
Cultural centre in Sary-Omir <i>Ongoing</i>	The facility is aimed to host cultural and festive events in Sary-Omir village of Terehta district. The cultural centre will be fully equipped.	2.19
Music school in Zhypity <i>Completed</i>	The music school accommodates 35 pupils from the Zhypity village of Syrymskiy district and is fully equipped with musical instruments and other special equipment.	0.56
Total		5.05

Social Projects in Burlin Region		
Reconstruction of	Project Description	Budget allocated in 2011 borrowed from 2012 (Million USD)
School workshop in Zharsuat <i>Ongoing</i>	This workshop is aimed to provide technical background and skills, such as carpentry, joinery for the pupils of Zharsuat village school	0.13
School in Priuralnoye <i>Completed</i>	The project is aimed to upgrade shabby building of Priuralnoye village school	0.62
School in Uspenovka <i>Ongoing</i>	The project is aimed to upgrade shabby building of Uspenovka village school	0.5
Process water supply system in Uspenovka <i>Ongoing</i>	The project is aimed to provide stable water supply for Uspenovka village. The water will be used for irrigation and technical needs	0.25
Total		1.5

# ENGAGING WITH THE COMMUNITIES

KPO is committed to being a good neighbour of the communities around its operations and to support the efforts of the local authorities pursuing communities' development goals. We therefore work to avoid or minimise impacts from our activities, maintain effective communications and relationships with interested and affected stakeholders, and create opportunities to enhance benefits to society.

## A STRATEGIC APPROACH

The reference framework for KPO activities in this area is set by the Social Performance Policy and Standards, supported by a number of operating procedures, introduced in 2009 and inspired by the Performance Standards of the International Finance Corporation. Though our social performance extends to reach all our society stakeholders, special attention is given to our area of direct impact, defined by the proximity to KPO operations. In June 2011, KPO issued its 2011 Social Performance plan, with the purpose of supporting the delivery of KPO business objectives by securing alignment with community and Government objectives and managing our relevant operational and project risks. Through this, KPO aims to contribute to the socio-economic aspects of the broader sustainable development agenda of the neighbouring communities and the Republic of Kazakhstan.

## BUILDING A CONSTRUCTIVE DIALOGUE

Consultations are a fundamental pillar of KPO activities in the social performance sphere. Different tools are adopted, ranging

from formalized consultative bodies (Village Councils) to public hearings and ad-hoc meetings with local authorities, NGOs and other key informants.

Village Councils covering the eight villages closest to the field have been set up in the four rural districts around the Karachaganak field. These consultative bodies were established in 2005 with a Memorandum of Understanding. Locally trusted village residents, representatives from the local authorities and KPO experts meet regularly on an ad-hoc basis to discuss issues of interest or concern and receive updates on current and planned KPO activities.

The Village Councils also identify priorities for KPO's social investment in the villages. This dialogue enables KPO to respond to issues as they emerge and develop opportunities, which benefit both KPO and the neighboring communities.

In 2011, the Village Councils met a total of 16 times. During the meetings the Village Council representatives and KPO Community Relations staff discussed issues of concern and the social, educational and infrastructural programmes to be implemented with support from KPO.

## HANDLING COMPLAINTS

KPO has a formal policy in place for handling complaints. Every resident of the neighbouring villages has the right to raise a complaint, either verbally to a KPO Community Liaison Officer or in writing using dedicated forms and boxes installed in all the villages. The company then investigates a complaint and makes a proposal for its settlement.

To improve efficiency of this mechanism, KPO's Community Grievance procedure was updated in 2010 taking into account the lessons learnt in the years of functioning. In December 2010, KPO Community Relations team met with the rural communities to explain the updated procedure and hand-over dedicated brochures to the residents.

In 2011 KPO undertook a first year review

of the revised Grievance Procedure and established that eight formal grievances were raised through it. The nature of the grievances covered infrastructure development, community health, resettlement, communication and waste disposal issues. All of them were closed appropriately by KPO with the prior agreement with complainants either by phone or face-to-face meeting. Complaints are mostly lodged by direct appeal to the KPO Community Liaison staff that often visit the villages.

## MONITORING AND PREVENTING IMPACTS ON THE LOCAL COMMUNITIES

There is a sanitary protection zone (SPZ) around the Karachaganak Field, which is used as a buffer zone between industrial enterprises and residential area. SPZ ensures dwelling settlement protection from potentially hazardous effects of industrial activity.

Without prejudice to the Contractor's rights to apply stabilised legislation in accordance with the FPSA, in 2011 KPO launched a project to update the SPZ to meet new regulatory requirements due to amendments to the RoK legislation made in late 2010, which set out requirements to determine the size and boundaries of the SPZ. Currently the first phase of establishing the size and boundaries of the SPZ is complete and the Estimated SPZ Project is developed. In 2012 KPO plans commencing the Field Observations Programme, which will run during the year. KPO plans to begin developing the SPZ Project upon completion of Field observations. We plan to hold public consultations that are mandatory at this stage, and take into account recommendations that we expect to receive.

Compliance with environmental quality parameters set by applicable law is ensured in KPO through the implementation of a comprehensive environmental monitoring programme. This programme allows detecting any deviation that may pose a threat both to the environment and local community.



**Air quality monitoring system includes:**

- Constant air quality monitoring through 12 fixed automatic environmental monitoring stations (EMS 001-012), installed within the Karachaganak Field and at the previous boundaries of the Sanitary Protection Zone. These stations are continuously in operation and integrated into the automatic system of environmental monitoring. Automatic environmental monitoring system performs a dual function acting as a notification system and a system of collecting data on air quality data in the area of the Karachaganak Field. The notification system activates an alarm when the level of pollutants in the ambient air exceeds the relevant allowable limits. EMSs are equipped with modern ultrasensitive gas analyzers, which gather real-time data on air quality in terms of main pollutants, such as hydrogen sulphide (H<sub>2</sub>S), sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO);
- Sampling and further test of air samples at the boundaries of the existing

SPZ. In 2011 KPO increased the frequency of air tests at the boundary of the new SPZ from one to four times a day with a view to enhance air quality control. The tests are conducted by accredited contractor laboratory;

- Routine air monitoring in nine villages through installed stationary stations, equipped with air sampling device. Monthly reports on the air quality are published in local media and sent to the villages to be placed on information boards. The stations are also used for immediate air sampling in the villages in case of odour complaints by residents. To implement 2011-2013 KPO Environmental Protective Measures Plan and decisions made by Working Group set up in 2010 for studying the issues of Berezovka village, KPO has installed two additional monitoring stations in Berezovka village in 2011;
- Two mobile environmental monitoring stations available in KPO are used for additional air quality monitoring activities, as well as in the event of odour complaints from the residents.

Thanks to efficient monitoring system KPO has timely data to ensure early detection and prompt response to potential MPC exceedance. During 2011 there were no cases of exceedance of MPC of monitored components in the air of the settlements adjacent to the Field registered that may be related to the operations of KOGCF Units.

During 2008 – 2010 on the initiative of the Village Councils, KPO involved a contractor in a research survey to review the state of vegetation, soil, surface water and livestock in nearby villages to KOGCF, including Berezovka. The results showed that the environmental conditions in the villages located around the Karachaganak Field is no different from the environmental conditions in the villages located far from the area of KPO's operations activity.

In 2011 Berezovka Village residents have been informed of the results of above stu-

dies at the Village Council meeting. Still, from 2011 KPO has resumed the research on the environmental conditions in the villages surrounding KOGCF. Over the period 2012 – 2014 KPO aims to continue the monitoring of pollutants in the environment and agricultural food products.

Long-term monitoring would allow obtaining data needed to assess the dynamic environmental condition of ecosystems in the villages adjacent to KOGCF.

### COMMUNITY PREPAREDNESS

KPO continues to actively engage with the communities and the authorities in order to ensure coordination and effective response in the event of an emergency situation. Communication and Public Information systems have been installed in 11 villages where more than 6,000 residents live. The systems control is maintained 24 hours a day by KPO. Moreover, to ensure all emergency response systems remain effective, regular exercises are held in each of the villages according to the set notification and evacuation plans. Particular attention is given to residents of communities living in the immediate vicinity of the Field and the Karachaganak – Bolshoy Chagan – Atyrau Export Pipeline. Regular sessions and trainings are provided to the residents of the said communities. So, 295 sessions were conducted, 578 people trained and 131 meetings were attended by about 700 people in the communities surrounding the Karachaganak Field. KPO Emergency Response Community Preparedness Specialists visited 41 villages located along Karachaganak – Bolshoy Chagan – Atyrau Export Pipeline. Meetings with more than 1,100 people residing in the communities along the export pipeline were held during the working trip.

At the meetings people were provided with clarifications on key issues such as the role and importance of KPO in the Kazakhstan's economy, actions that need to be taken as part of the emergency response procedure, communities' notification procedures in the

# ENGAGING WITH THE COMMUNITIES

event of potential emergency at a KPO facility, and measures that would be taken to eliminate the emergency.

The 2011 key events hosted by KPO Emergency Response (ER) team included the following:

- In 2011, ER team jointly with representatives of local authorities, developed Emergency Response Plans and Evacuation plans for each village.
  - From May 28 to June 3, 2011 an international workshop involving the members of the International Civil Defence Organization (ICDO) was held in Uralsk, the administrative centre of the West Kazakhstan Oblast. On June 2, 2011 the ICDO delegation, accompanied by representatives of the RoK Emergency Situations Ministry and the heads of Emergency Situations Departments of the various RoK Oblasts visited the Karachaganak Field. The delegation included representatives of the Ministries and Departments of Emergency Situation of Azerbaijan, Russia, Kyrgyzstan.
- The KPO Emergency Response specialists made a presentation on KPO Emergency Rescue Services and Village Alarm Stations at the above mentioned workshop. A full range of the KPO emergency rescue vehicles equipped with modern rescue equipment was demonstrated during the workshop. In addition to that, a Demonstration exercise was conducted by KPO Emergency Response group at a training ground. The observers had praised the coordinated action of the rescuers and the interaction between the emergency services.
- In September 2011 the KPO Emergency Response specialists arranged practical and theoretical training sessions on response to oil and chemical spills on land and water. Training was conducted for the personnel involved in the Emergency Response system



Village Council meeting at Uspenovka village

(ER department group, KPO units' volunteer gas rescuers and Security Department). Training involved 75 people. The training was provided by competent and professional instructors.

- On November 10, 2011 Field HSE Emergency Response group held a workshop on the issues of emergency response interaction between KPO and its contractors. The workshop was attended by representatives of 11 KPO Departments and 17 contractors.
- In 2011, an integrated exercise on oil spill response at Karachaganak – Atyrau and Karachaganak – Orenburg Export Pipeline involving IMT Levels 1 and 2 was held.

## SUPPORTING DEVELOPMENT

Improving livelihoods is a key aspiration for the communities around Karachaganak, and KPO strives to be supportive of these aims, complementing the efforts made by the local authorities.

### Village Council and Community Development projects

Community development activities are conducted to fulfil KPO's responsibilities with respect to neighbouring communities and to contribute to their long term development.

Through the Village Councils, the communities which we support propose projects

that aim to improve the basic social infrastructure of the villages and their social life. KPO then evaluates the proposals received, assessing their alignment with community needs, overall priority, technical feasibility and budget associated. Then a set of community development projects is agreed and realized in the eight villages surrounding the Field. Over the years, we aim at maintaining balance of support across the different villages.

For lack of budget approval from the Joint Operating Committee for community development programmes in 2011, KPO was not able to continue the programs such as the English Language Programme, Mobile School of Arts and summer camps and resorts for the rural elderly people and children.

However, KPO remains adamant to continue supporting the communities around the Field. To maintain the fruitful relationships built with the neighbouring communities over the past few years, in 2011 KPO announced a Rural Pupils' Contest of Drawings, Photographs and Essays among the schoolchildren of Berezovka, Uspenovka, Zhanatalap, Zharsuat, Karachaganak, Priuralnoye and Bestau villages.

### Rural Pupils' Contest

This Rural Pupils' Contest was held with the aim to engage the schoolchildren in the extra-curricular and summer activi-





ties. Schoolchildren, school teachers and partially pensioners were invited to take proactive part in the contest. The pensioners were involved in essay writing in order to pass on the communities' history to the youth, so that it could be described in essays.

The main objective of this project was to support young talents and to foster a caring attitude towards the environment. Schoolchildren of all age groups (1-11 classes) from the seven villages around the Karachaganak Field participated in the contest.

On 21 September 2011, an Award Ceremony was held in the House of Culture of Aksai attended by 250 schoolchildren, community representatives, KPO management, local authorities and media. This has been a memorable day for the kids, their teachers and parents who expressed their wish that KPO continues holding such events for the neighbouring communities and the schoolchildren.

A selection of the works included in a "My village is my Motherland" dedicated publication has been issued at the beginning of 2012. This catalogue is an attempt to tell about the bright and wonderful project which was beneficial for schoolchildren from the villages around the Field. The catalogue with the best schoolchildren's works is the demonstration of their creative approach, sincerity and kindness. Given the high quality of the works received, it was also decided to use a selection of the best schoolchildren drawings to decorate the KPO 2012 corporate calendar.

#### The Pilot Community Scholarship Programme

In 2011 KPO continued to support the Community Scholarship Project launched in 2010 in cooperation with the Burlin District Education Department to enhance the availability of professionals in the rural districts. Children from the villages are funded to have specific education under the com-

mitment for them to come back to their rural district and serve for a certain number of years. First three students are continuing their second year studies at the West Kazakhstan University and College.

#### Workshop in Atyrau

In July 2011, KPO Community Relations team participated in the workshop "Community Affairs and Sustainable Development: Lessons Learned and Best Practices in Kazakhstan" involving major oil & gas companies in Kazakhstan, such as North Caspian Operating Company (NCOC), Tengizchevroil (TCO) and KPO. The workshop was held in Atyrau and hosted by NCOC.

This was the first workshop organised in sustainability area and an intensive three-days programme included visits and tours of NCOC social infrastructural projects, meetings with NGOs and sustainable development projects implemented by NCOC and TCO in Atyrau.

During the working seminar held on the second day the participants of NCOC, TCO and KPO shared experience, best practice and lessons learned over the years of implementing projects in community relations and sustainability area.

The workshop helped all participants build a constructive dialogue and develop networking between the peer companies' representatives. All attendees noted the benefits of such cooperation established and expressed hope that this cooperation will be maintained in the future.

## INFRASTRUCTURAL PROJECTS IN THE NEIGHBOURING COMMUNITIES

In 2011 several projects have been proposed to KPO by the Village Councils with the aim to improve the basic social infrastructure of the villages and their social life.

KPO then selected five priority infrastructure projects requested by the Village Councils in the four rural districts of the Burlin District around the Karachaganak Field, and approached the Akimat of the West Kazakhstan Oblast with a proposal to implement these initiatives. As a result of successful negotiations with the authorities, an amount of 3.5 million US dollars was allocated for the execution of the following infrastructure projects. The projects include upgrade of the water supply system in Berezovka village, reconstruction of school workshop in Zharsuat village, complete repair of schools in Priuralnoye and Uspenovka villages, and reconstruction of summer irrigation water system in Uspenovka village.

In 2011 KPO completed the reconstruction of the Priuralnoye village school, which will make it possible to educate 464 schoolchildren. There are 14 classrooms, one gymnasium, a conference room, a mini-centre and canteen at the school.

The renovations including the full reconstruction of the existing building, the boiler house, the rehabilitation of the water and sewage systems was performed by a local company.

The inauguration ceremony dedicated to successful completion of the reconstruction

# ENGAGING WITH THE COMMUNITIES

of Priuralnoye village school was attended by KPO senior management, local authorities, contractor company representatives and media. The Priuralnyi rural district Akim Mr. Raimkulov T. on behalf of local community expressed his appreciation to KPO for its continued support for the development of the Priuralnoye village and expressed hope that such fruitful cooperation of KPO and the Village Councils will continue.

Reconstruction of school workshop in Zhar-suat village and Uspenovka village school commenced at the end of 2011 and will be completed in 2012.

Upgrade of the water supply system in Be-rezovka village and reconstruction of summer irrigation water system in Uspenovka village will commence in 2012.

## Sponsorship and Donations Programme

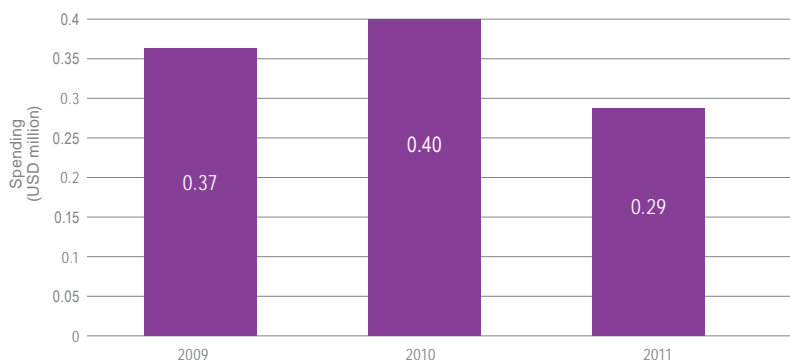
A dedicated fund administered by an internal committee in accordance with the KPO Sponsorship and Donations Policy enabled KPO to support vulnerable groups and public associations active in the fields of community health and safety, social development, education, arts and culture, and sports. Apart from evaluating proposals for funding coming from the organizations, KPO also actively engages with them to stimulate initiatives responding at identified challenges in society.

Through this programme, 45 different projects were supported in 2011 for a total of about USD 294,391.

The most significant projects supported by KPO Sponsorship and Donations Programme are as listed below.

One of the main targets for KPO corporate contribution in 2011 was the Burlinskyi District Association of the Disabled People, which arranges the sanatorium treatment of elderly people, summer rest for disabled children, and provides the disabled with medicine. In the framework of the Association, which includes 500 members, the specially-designed Committee for the Distribution of Charity Funds regularly reviews

## SPONSORSHIP AND DONATIONS SPENDING



incoming requests received from disabled people facing hardship and provides needed assistance. In addition, a number of sports and cultural events were organised on various holidays, such as Victory Day, Nauryz, Children's Protection Day, Disabled People Day and New Year.

Among the foundations supported is the Burlinskyi District Veterans' Council. KPO donated to this organisation a sanatorium treatment for 80 pensioners, labour and war veterans.

With the financial support of KPO the "Baiterek" Association of Disabled Children carries on the functioning of the Special Educational Centre for disabled children in Uralsk in the framework of the project the "Prevention of psycho neurological pathology and social adaptation of children with limited abilities". The centre includes logopaedic, sensory, and physical therapy rooms.

20 wheelchairs for children with mental disorder at the age of 1.5 – 18 years were donated to Shapagat Medical Social Centre located in Uralsk. The Centre implements rehabilitation programme and provides medical service and balanced feeding for children.

KPO proactively supports initiatives focused on the development of the youth. In particular, due to KPO sponsorship support, six children from Aksai School of arts studying Arts at-



At the ceremony of the wheelchairs donation in Shapagat Medical Social Centre

tended Italy during the summer holidays in 2011. They visited galleries and museums of Rome, Venice, the Vatican and participated in master classes in Academy of Arts in Florence.

The important cultural initiative sponsored in 2011 was a trip of 38 children from Ademi Dance Group to Saratov (Russia) for participation of the International dance contest. Besides, a concert grand piano was donated to Children's Music school in Aksai. The instrument will be used by 384 children who study playing piano, dombyra, kobyz, flute, violin and attend vocal music sections.

As part of KPO community engagement activities, some funds were donated to support Oblast and regional schools and kindergartens. In 2011, KPO donated furniture for BolsheChaganskaya village school and toys for Peremyotnoe village kindergarten and Uralsk kindergarten # 22. Aksai kindergartens # 6 and # 7 were supported for acquiring trainers, dry pools, soft modules, developing games to equip special groups of disabled children as part of remedial education and development. Books and encyclopaedias were donated by KPO to the Aksai school # 6, sports gears – for Aksai school # 1. A playground in Uralsk special school for children with speech and hearing impairment was installed with support from KPO.

Annually, KPO traditionally allocates funds to community reach-out events. These include such holidays and occasions, like New Year, Victory Day and Knowledge Day. On the New Year's Eve, KPO presented sweet gifts to 1240 children from the villages adjacent to the Karachaganak Field: Uspenovka, Berezovka, Zharsuat, Zhanatalap, Priuralnoye, Karachaganak, Dimitrovo and Bestau.

In 2011, 170 school children from low-income families from five rural districts around the Karachaganak Field were provided with backpacks and stationary on the occasion of the Knowledge Day.

On the eve of the Victory Day in 2011, 25



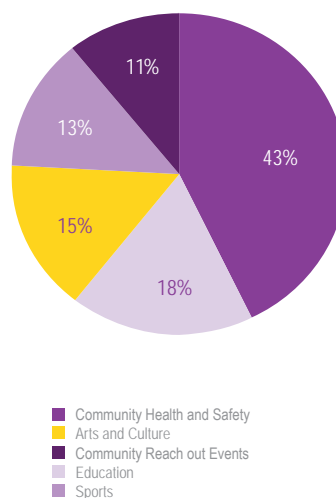
Pupils of Aksai School of Arts participated in master classes in the Academy of Arts in Florence

veterans from the villages adjacent to the Karachaganak Field were presented with carpets on behalf of KPO. The presents were handed out by the KPO Community Relations representatives who visited and congratulated each veteran.

Among sport organizations actively supported by KPO in 2011 there were the Gra-

cia Volleyball club and WKO Table Tennis Federation, which both demonstrated good results in high league international tournaments. Besides, with the help of KPO Burlin Chess Federation provided chess lessons and tournaments for adults and children of Aksai.

#### Distribution of funds under KPO 2011 Sponsorship and Donations Programme



# TABLE OF STANDARD DISCLOSURES AGAINST GRI INDICATORS

Prepared in compliance with the requirements of the Global Reporting Initiative's (GRI) G3, KPO 2011 Sustainability Report meets the C+ GRI application reporting level. In the table below we provide an index to our disclosures against the GRI indicators.

Yes	Indicator is covered in full.
Partial	Indicator is covered in part.
Not applicable	Indicator does not apply to KPO's business
No	Indicator is not reported.

Profile disclosure	GRI Indicator	Section and page / Response	Disclosure status
STANDARD DISCLOSURES PART I: Profile Disclosures			
1. Strategy & Analysis			
1.1	Statement from the most senior decisionmaker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.	Letter from the General Director (pages 6-7)	Yes
2. Organisational Profile			
2.1	Name of the organization.	Contents (page 5)	Yes
2.2	Primary brands, products, and/or services.	Operating Karachaganak (pages 12-13)	Yes
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	Operating Karachaganak (pages 12-13)	Yes
2.4	Location of organization's headquarters.	Feedback (Back cover)	Yes
	Number of countries where the organization operates;	Operating Karachaganak (pages 12-13)	Yes
	Names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.		Not applicable
2.6	Nature of ownership and legal form.	Operating Karachaganak (pages 12-13)	Yes
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	Operating Karachaganak (pages 12-13)	Yes
2.8	Scale of the reporting organization, including:	Investing in Our People (page 34); Operating Karachaganak (page 12);	Yes
	· Number of employees;		Not reported due to confidentiality limitations under the FPISA*
	· Net sales (for private sector organizations) or net revenues (for public sector organizations);		Not applicable
	· Total capitalization* broken down in terms of debt and equity (for private sector organizations); and		Not applicable
	· Quantity of products or services provided.	2011 Production (page 13)	Yes
2.9	Significant changes during the reporting period regarding size, structure, or ownership including the location of, or changes in operations, including facility openings, closings, and expansions;	Letter from the General Director (page 6-7); Operating Karachaganak (pages 12-13); Karachaganak at a glance (page 14); Our Performance and Targets (pages 8-10)	Yes
	Significant changes in regarding size, structure, or ownership including changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations)		Not applicable
2.10	Awards received during the reporting period.	No awards were received by KPO concerning sustainability	Yes
3. Report Parameters			
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	Report Profile (page 5), Letter from the General Director (page 6)	Yes
3.2	Date of most recent previous report (if any).	Report Profile (page 5)	Yes
3.3	Reporting cycle (annual, biennial, etc.)	Report Profile (page 5)	Yes
3.4	Contact point for questions regarding the report or its contents.	Feedback (Back cover)	Yes

3.5	Process for defining report content, including: · Determining materiality;	Report Scope and Boundaries (page 5)	Yes
	· Prioritizing topics within the report;	Sustainability team, other controllers and managers have worked together to identify and present sustainability information they believe is important for stakeholders.	Yes
	· Identifying stakeholders the organization expects to use the report.	Stakeholders (page 5)	Yes
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	Operating Karachaganak (pages 12-13); Karachaganak at a glance (pages 14-15)	Yes
3.7	State any specific limitations on the scope or boundary of the report.	No limitations	Yes
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	Report profile (page 5)	Yes
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	GHG Reduction strategy (pages 28-29), Primary Energy Consumption (page 29), Emissions to air (pages 26-27)	Yes**
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Emissions to air (pages 26-27)	Yes**
3.12	Table identifying the location of the Standard Disclosures in the report.	Table of Standard Disclosures against GRI Indicators (pages 52-55)	Yes
<b>4. Governance, Commitments, and Engagement</b>			
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	Corporate Governance at KPO (pages 16)	Yes
	Indicate any direct responsibility for economic, social and environmental performance of such committees.	Corporate Governance at KPO (pages 16-17)	Yes
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	Corporate Governance at KPO (pages 16-17)	Yes
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.		Not applicable
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	Corporate Governance at KPO (pages 16); Investing in our People (pages 37)	Yes***
4.14	List of stakeholder groups engaged by the organization.	Stakeholders (page 5)	Yes
4.15	Basis for identification and selection of stakeholders with whom to engage.	Stakeholder engagement (page 17)	Yes****

Notes: \* As an Operator acting under the Final Production Sharing Agreement (FPSA) on behalf of the four Parent Companies, KPO reports on the reserves in place, on gross annual production and sales and on the number of employees. The Parent Companies of the Karachaganak Venture are the owners of information related to net revenues, and total capitalisation data. Disclosure Item 2.8

\*\* Assessment method for air emissions has been revised. Primary energy consumption calculation was corrected. Disclosure Items 3.10 and 3.11

\*\*\* In the KPO Venture governance, voting amongst the four Karachaganak Venture partners is unanimous. Shareholders are represented to the highest governance body. No mechanisms for employees in place to provide their feedback to the highest governance body. Disclosure Item 4.4

\*\*\*\* Processes with other relevant stakeholders are determined by several policies and procedures, such as Karachaganak Community Engagement Plan, Stakeholder Engagement Operating Procedure, KPO Sponsorship and Donations Policy, Internal Communications Policy, and the Local Content Development Programme. Disclosure Item 4.15

# TABLE OF STANDARD DISCLOSURES AGAINST GRI INDICATORS

Profile disclosure	GRI Indicator	Section and page / Response	Disclosure status
STANDARD DISCLOSURES PART II: Performance Indicators			
Economic Performance Indicators			
EC 6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation. (Core)	Contributing to Economic Development (page 38), Letter from the General Director (page 7)	Yes
EC 7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation. (Core)	Investing in Local People (pages 40-41)	Yes
EC 8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	Investing in Local People (pages 35-37), Contributing to Economic Development (pages 41-45), Engaging with the Communities (pages 46-51), Letter from the General Director (pages 6-7)	Yes
Environmental Performance Indicators			
EN 3	Direct energy consumption by primary energy source. (Core)	GHG Reduction Strategy (pages 28-29)	Yes
EN 8	Total water withdrawal by source. (Core)	Water (pages 29-30)	Yes
EN 10	Percentage and total volume of water recycled and reused. (Additional)	Water (page 30)	Yes
EN 11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas. (Core)	Biodiversity and ecosystems (page 33); Operating Karachaganak (pages 12-13)	Partial
EN 13	Habitats protected or restored. (Additional)	Gryphone area remediation (page 33)	Yes
EN 14	Strategies, current actions, and future plans for managing impacts on biodiversity. (Additional)	Biodiversity and ecosystems (page 33)	Partial
EN 16	Total direct and indirect greenhouse gas emissions by weight. (Core)	GHG Reduction Strategy (pages 28-29)	Yes
EN 18	Initiatives to reduce greenhouse gas emissions and reductions achieved. (Additional)	GHG Reduction Strategy (pages 28-29)	Yes
EN 20	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions by type and weight. (Core)	Emissions to air (pages 26-27)	Yes
EN 21	Total water discharge by quality and destination. (Core)	Water (pages 29-30)	Partial
EN 22	Total weight of waste by type and disposal method. (Core)	Waste Management (pages 31-33)	Yes YYes
EN 23	The total number and total volume of recorded significant spills.	Spills (page 33)	Yes
Labor Practices and Decent Work Performance Indicators			
LA 1	Total workforce by employment type, employment contract, and region. (Core)	Investing in our people (page 34), Investing in local people (pages 39-41)	Partial
LA 4	Percentage of employees covered by collective bargaining agreements. (Core)	Investing in our people (page 37)	Yes
LA 7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region. (Core)	Safety Performance in 2011 (pages 18-19)	Partial
LA 10	Average hours of training per year per employee by employee category. (Core)	Investing in our people (page 35)	Partial*
LA 13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	Investing in our people (page 34); Investing in Local People (page 41)	Yes**
LA 14	Ratio of basic salary of men to women by employee category.		Yes***

Profile disclosure	GRI Indicator	Section and page / Response	Disclosure status
STANDARD DISCLOSURES PART II: Performance Indicators			
Human rights			
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	Anti-corruption due diligence process (page 17)	Partial
Society			
S03	Percentage of employees trained in organization's anti-corruption policies and procedures.	Compliance Framework (pages 16-17)	Yes

Notes: \* Training for expatriate personnel is not foreseen by the FPSA.

Disclosure Item LA 10


\*\* Diversity information for management is provided on gender, age group, and nationality. Other categories are not relevant.

Disclosure Item LA 13

\*\*\* Basic salaries are established for employee categories regardless of gender, and so basic salaries for women and men are equal.

Disclosure Item LA 14

# ASSURANCE STATEMENT



**Independent Assurance Report  
on the Karachaganak Sustainability  
Report 2011 of Karachaganak  
Petroleum Operating B.V.**

**To the management and stakeholders  
of Karachaganak Petroleum Operating B.V.**

At the request of Karachaganak Petroleum Operating B.V. (hereinafter 'KPO') we have performed an assurance engagement.

**Subject Matter**

Our engagement is aimed to obtain a limited level of assurance that:

- Sustainability performance summary information and data included in 'Karachaganak Sustainability Report 2011: The Enduring Benefits of Karachaganak' (hereinafter 'the Report'), in all material aspects, provide reliable and sufficient representation of sustainability policies, activities, events and performance of KPO in 2011,
- The reporting processes related to the information and data collection on key performance indicators regarding human resources, environment, health and safety, national content of the goods and services purchased, and social investments are in place and are compliant with relevant principles of the Global Reporting Initiative's Sustainability Reporting Framework (hereinafter 'the GRI Framework'), including version 3.0 of the Sustainability Reporting Guidelines (hereinafter 'the GRI 3.0 Guidelines'),
- Sustainability related policies and procedures corresponding to the KPO Sustainable Development Charter and described in the Report, exist,
- The Report is consistent with the principles and the requirements of 'C+' Application Level of the GRI 3.0 Guidelines.

As defined in the *International Framework for Assurance Engagements* issued by International Federation of Accountants (hereinafter 'IFAC'), evidence-gathering procedures in order to obtain limited assurance are substantially less in scope than procedures to obtain reasonable assurance and consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement.

**Criteria**

We have assessed the subject matter of our engagement against the GRI Framework, including the GRI 3.0 Guidelines, and the KPO Sustainable Development Charter which is available at KPO's corporate website. We believe that these criteria are appropriate given the purpose of our assurance engagement.

**Responsibility of the Management of KPO**

The management of KPO is responsible for introduction of sustainability related policies and procedures and the preparation of the Report and the information therein. This responsibility includes designing, implementing and maintaining internal controls relevant to the preparation of a sustainability report that is free of material misstatements, selecting and applying appropriate reporting principles and using measurement methods and estimates that are reasonable in the circumstances. The choices made by the management, the scope of the Report and the reporting principles, including any inherent limitations that could affect the reliability of information, are set out in the 'Report Profile' section on page 5 of the Report.

**Our Responsibility**

Our responsibility is to express a conclusion with regard to the subject matter of our assurance engagement.

We have performed our engagement in accordance with International Standard on Assurance Engagements 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by IFAC.

We have performed the procedures deemed necessary to provide a basis for our conclusion. Our principal procedures were:

- Analysis of KPO's sustainability related policies and procedures, as described in the Report,
- Interviews with relevant KPO's managers and key personnel responsible for collating sustainability related information, implementation of KPO sustainability related policies and procedures, relevant activities and performance,
- Benchmarking of the Report against sustainability reports of selected international peers of KPO,
- Review of a selection of corporate and external publications with respect to KPO's sustainability policies, activities, events, and performance in 2011,
- Identification of material issues based on the procedures described above and analysis of identified material issues' reflection in the Report,





- Review of data samples for selected key performance indicators regarding human resources, environment, health and safety, national content of the goods and services purchased, and social investments, as well as reporting processes to assess whether these data are collected, prepared, collated and reported appropriately,
- Visit to KPO's main offices and to the Eco Centre, a complex for recycling, treatment and disposal of drilling fluids, drilling and production waste at the Karachaganak oil and gas field, to conduct interviews and observe operations,
- Collection on a sample basis of evidence substantiating the sustainability performance summary information and data, included in the Report, and existence of policies and procedures corresponding to the directions listed in the KPO Sustainable Development Charter and described in the Report,
- Assessment of compliance of the Report and the underlying reporting processes with relevant sustainability reporting principles of the GRI G3.0 Guidelines used by KPO, and
- Assessment of compliance of information and data disclosures in the Report with the requirements of 'C+' application level of the GRI G3.0 Guidelines.

#### **Conclusion**

Based on our work performed nothing has come to our attention that causes us to believe that:

- The sustainability performance summary information and data included in the Report, in all material aspects, do not provide reliable and sufficient representation of sustainability policies, activities, events and performance of KPO during 2011 in accordance with the GRI Framework and the KPO Sustainable Development Charter.
- The reporting processes related to the information and data collection on key performance indicators regarding human resources, environment, health and safety, national content of the goods and services purchased, and social investments are not in place and compliant with relevant principles of the GRI G3.0 Guidelines.
- Sustainability related policies and procedures corresponding to the KPO Sustainable Development Charter and described in the Report, are not existent.
- The Report is not consistent with the principles and the requirements of 'C+' Application Level of the GRI G3.0 Guidelines.

*Ernst & Young Advisory LLP*

**Almaty**

30.03.2012

# GLOSSARY

## TERMS / ABBREVIATIONS / DEFINITIONS

AGDS	Automatic Gas Distribution Stations
Akim	Head of administrative region (can be at the village, town or region level)
BAP	Biodiversity Action Plan
BBS	Behavioural Based Safety
CMS	Competence Management System
CMWG	Contractor Management Working Group
CO <sub>2</sub> e	Carbon dioxide equivalent
Contractor / Parent companies	Refers to BG, Eni, Lukoil and Chevron
CPC	Caspian Pipeline Consortium
DLN	Dry low NO <sub>x</sub> fuel
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EMS	Environmental Monitoring Stations
EOPS	Early Oil Production Satellite
FPSA	Final Production Sharing Agreement
FWPS	Field Waste Polygon Site
GHG	Greenhouse Gas
GPI	General Purpose Incinerator
GRI	Global Reporting Initiative
H <sub>2</sub> S	Hydrogen Sulphide
HRA	Health Risk Assessment
HSE	Health, Safety and Environment
HSE MS	Health, Safety and Environment Management System
ICDO	International Civil Defence Organization
ISO 14001	Internationally accepted standard that sets out requirements for putting in place an effective Environmental Management System
JOC	Joint Operating Committee
KATS	Karachaganak-Atyrau Transportation System
KMG	KazMunaiGaz
KOGCF	Karachaganak Oil and Gas Condensate Field
KOGOA	Kazakhstan Oil & Gas Operators Association

KOTS	Karachaganak-Orenburg Transportation System
KPC	Karachaganak Processing Complex
KPI	Key Performance Indicator
KPO	Karachaganak Petroleum Operating B.V.
kt	Kiloton
LMP	Liquid Mud Plant
LTI	Lost Time Incident
LTIF	Lost Time Injury Frequency
LTP	Liquid Treatment Plant
Mboe	Millions of barrels of oil equivalent
MERP	Medical Emergency Response Plan
MPC	Maximum permissible concentrations
Mscm	Million standard cubic metres
NGO	Non-governmental organisation
OBM	Oil based mud
OGP	Oil and gas producers
OHH	Occupational Health and Hygiene
OHSAS 18001	Internationally recognised assessment specification for occupational health and safety management systems
OPITO	Offshore Petroleum Industry Training Organization
RKI	Rotary Kiln Incinerator
RoK	Republic of Kazakhstan
SO <sub>2</sub>	Sulphur dioxide
SPZ	Sanitary Protection Zone
TCC	Thermo-Mechanical Cuttings Cleaning facility
tcf	Trillion cubic feet
TRIF	Total Recordable Injury Frequency
USD	United States Dollars
WKO	West Kazakhstan Oblast



## FEEDBACK

Tell us what you think of this Report or if you want to know more.  
Your views will help us shape the 2012 edition.

KPO Sustainability  
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