



KARACHAGANAK  
SUSTAINABILITY  
REPORT

2013



THE ENDURING BENEFITS  
OF KARACHAGANAK



Karachaganak





Musicians of the Burlin School of Music

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# OUR COMMITMENT TO SUSTAINABLE DEVELOPMENT

*This is the sixth 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.*

In following the principles of sustainable development we take as a reference its widely acknowledged definition of the Brundtland Commission describing it as a “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.





# REPORT PROFILE

*Karachaganak field panoramic view*

The present report covers our results in 2013 and plans for the coming year. The report also contains information from the years 2012 and 2011 to ensure the comparative evaluation of our performance over the previous years. The report is issued annually. The previous report was issued in May 2013.

## REPORT SCOPE AND BOUNDARIES

The report presents information on our main activities defined in the section 'Operations and Projects' and our environmental, social and economic performance. The report covers sustainability aspects of the KPO operations in Kazakhstan.

## MATERIALITY ASPECTS

The KPO's sustainability reporting is an evolving process based on the review and analysis of the aspects important to sustainability. Our analysis of risks and opportunities, involvement of our employees, who are the owners of the data in our report, into process of review for stakeholder identification and engagement and careful consideration of the Global Reporting Initiatives (GRI) Guidelines have helped us make an assessment of the material issues to be included into this report.

During 2013 we have carefully reviewed our sustainability reporting procedure taking the lessons learnt from the previous years. KPO sustainability reporting procedure provides that the material aspects are identified in consequence of engagement with multilateral communication of KPO and the RoK governmental authorities, the PSA, counterparties, business partners, local communities and media. Issues of concern raised by local communities at Village Councils, forums, public hearings, meetings held by KPO have also helped us identify the material aspects of our report.

As sustainability reporting is a relatively new and gradually evolving process in Kazakhstan, we aim to work more with our external stakeholders raising their awareness of sustainability aspects in the years to come, to get a structured feedback on our reports and better identify the areas of interest for our stakeholders.

## STAKEHOLDERS

As part of our normal business practice, we engage and consult with a wide range of stakeholders. Good relationships with these stakeholder groups are essential to our long-term success, and input from our dialogue with them has helped in shaping the content of this report.

The group of stakeholders we engage with includes our Parent Companies, the PSA Authority, employees, trade unions, the government, counterparties, business partners, media, local community and NGOs.

The ways we engage with our stakeholders are summarised by sustainability areas and presented in Stakeholder Engagement chapter on pages 24-27.

## INDEPENDENT ASSURANCE

KPO involves external assurance provider to ensure transparency and validity of the information given in the report. EY provides limited independent assurance over the information and data included in this report, as well as its compliance with the Global Reporting Initiative Sustainability reporting guidelines. Scope and limitations of the assurance are presented in the independent assurance report, which is included on pages 102-103.

## GLOBAL REPORTING INITIATIVE

This report has been produced in line with the Global Reporting Initiative's (GRI) Guidelines, the de facto global model for sustainability reporting. KPO adheres to sustainability reporting principles included in the GRI Guidelines. The report is prepared 'in accordance' with GRI Guidelines version G4 following the Core option. The Report is also available on our website at [www.kpo.kz](http://www.kpo.kz).

# LETTER FROM GENERAL DIRECTOR

## Dear Report Readers,

I am very pleased to be able to present to you this Sustainability Report, which is the sixth annual report we have issued since 2008 on sustainable development in Karachaganak.

As always, we focus on safe operations. Last year joint KPO and contractors' lost time injury (LTI) rate was lower than in 2012, but we still have not achieved our target for the year. Despite our achievements for safe operations and shutdown activities, we had 7 lost time incidents in the year not related to process and core activity. Personal safety awareness and safe systems of work continue to be the focus for us with the goal to improve our overall safety performance.

I am proud of our achievements in 2013, in which Karachaganak produced 136 million barrels of oil equivalent. Last year was a shutdown year and the phased shutdown implementation was very successful in terms of the facilities maintenance and operational performance, compared to the previous shutdown periods in 2010 and 2008.

In 2013 KPO delivered over 9.7 million tonnes of stabilised oil to western markets and 8.2 billion cubic meters of gas to Orenburg – record volumes of oil and gas for a shutdown year.

KPO gained access to a new oil export destination on the Baltic Sea - the Russian port of Ust'-Luga. This new route further expands our stabilized oil markets allowing access to potentially higher prices and increasing the long-term revenue for the Republic of Kazakhstan.

We continued with our program of drilling wells and hooking them up to our production facilities and continue our plan to optimise production. The Western area of the Karachaganak Field has now been successfully drilled and first commercial oil has been proved to be recoverable.

In addition to the 16 environmental monitoring stations operating on the perimeter of the Karachaganak Field, two more stations were installed in 2013 completing the full project scope.

A number of initiatives at Unit 3 progressed during the year in order to continue our risk reduction program at this plant, which has been operating since 1984. Unit-3 and Karachaganak-Orenburg Transportation system (KOTS) team achieved a milestone of 4 years operations without a single lost time injury. This is an outstanding safety performance thanks to the exceptional focus and commitment to team work.

Process Safety and Asset Integrity areas have progressed during the year with the focus on management of change and further integration of a risk-based approach.

In accordance with the 2011 Field Development Plan approved by the Authorities, our Project Development



and Project Execution teams continued progressing all the Plateau Extension Projects having started the construction phase for some of them. These projects include:

- Karachaganak Expansion Project (KEP) which aims to continue the further development of the Karachaganak Field, mainly through the increase of the gas injection and gas handling facilities, which are required to manage the increased volumes of gas from the field as the ratio of produced gas to oil increases with time. The concept selection work for this Project is in progress. Work is proceeding to identify the areas within KEP, where it will be possible to maximise the levels of local content, particularly in the areas of goods and manufacturing services;
- KPC Gas Debottlenecking Project, which aims to process the increasing volumes of gas from the field as the reservoir matures;
- Gas Oil Ratio (GoR) Balancing Project, where significant progress was made and construction works are ongoing;
- Unit 3 Future Development Strategy has been commenced in order to consider replacement or refurbishment of the existing, elderly plant with safer and more efficient facilities;
- Western Area Early Development Project, which entered the FEED / detail design phase;
- Unit 2 Gas Injection Upgrade, which is progressing the concept selection phase.

Our governance and assurance programs continued during the year as we held a number of assurance reviews, assists and workshops and capital project forums, plus 10 internal audits, culminating in November with our annual independent Parent Company review, with a team comprised from all five of our Partners.

In June, the 2014 Environment Protective Measures Plan received the public's approval at the public hearings in Aksai and Bolshoi Chagan. The KPO gas utilisation rate has reached 99.84% being sustained at a world-class level. The Environmental Emissions Permits for 2014 have been received.

The HSE Card mechanism proved to be an effective tool for recording of preventive and corrective actions. In 2013, six KPO employees were presented with the "Golden Hard Hat" Award for outstanding performance in safety, by BG Group. KPO engages many contractors to maintain safe and effective operations and it is vital to ensure the high quality assurance and control over the activities performed by these contractors and their sub-contractors. Last year KPO held two internal HSE Forums and one with contractors. Developing our supply chain monitoring processes is important to ensure our asset integrity and supply sustainability.

We successfully carried out a number of 'Cry Wolf' training sessions on Major Hazard awareness including demonstrations, group discussions and exercises with engagement of internally trained actors to visualize the factors that may contribute to a major accident. Our integrated emergency exercise held in August in the Karachaganak Field jointly with the WKO Department of Emergency Situations has been highly praised and recognised by the Ministry of Emergency Situations of Kazakhstan. This was followed by the awards granted to KPO employees for active participation in development of the state system of prevention and response to emergency situations.

People are our main asset, and we remain committed to developing and motivating our staff. In 2013, 8 senior and middle manager positions and 9 positions of the professional and supervisory roles have been nationalized at KPO.

Early in the year, 46 KPO professionals were awarded certificates of successful completion of the internationally-recognised Safety Training and Enhancement Programme (STEP). In September 32 young graduates successfully completed the programme for Production and Maintenance Engineers at the OPITO Oil and Gas Academy standards, being employed by the Company on various engineering roles. We continued the Welcome Day tradition started in 2012 for the newcomers, as well as for their peers, to help them successfully integrate into the business.

In 2013 KPO received external certification by OPITO for its Competency Management System, becoming the first OPITO certified oil & gas production company in Central Asia.

KPO is one of the first companies in Kazakhstan to successfully introduce a local content programme, which has allowed involving more than three thousand Kazakhstani companies into the development of Karachaganak. These companies have received orders from KPO for over USD 4 billion.

In 2013 the Kazakh content in KPO contracts for the provision of goods, works and services was over 50%, exceeding USD 460 mln.

In December, 2013 KPO received Silver 'Paryz' Award for the construction of the secondary school in Uralsk in the 'Best Social Project' category at the official ceremony of the Republican Contest on Corporate Social Responsibility held in Astana. The social infrastructure projects completed by KPO during 2013 included kindergarten for 350 children, secondary school in Saikuduk, motor roads in Uralsk, equipment for schools in the villages.

In October, KPO was awarded the Environmental safety prize for its Gryphon Land Rehabilitation Project at the KazEnergy Show Room held in Astana during the 8<sup>th</sup> KazEnergy Forum.

Our engagement with the local communities and authorities continued successfully, resulting in the signature of the tripartite Memorandum of Understanding on the Village Councils, holding three public hearings on 2014 KPO Environmental Protective Measures Plan and the Tree Planting Activities on SPZ Project, a number of Village council meetings with local communities on the topics covering the environmental, economic and social issues of public interest. In December, KPO was awarded a Gratitude Letter from the West Kazakhstan Oblast Akimat for its contribution and implementation of educational programmes in Burlin District.

The level of disclosure of information in our Sustainability Report for 2012 issued in 'in accordance' with application level B+ of the Global Reporting Initiative Guidelines was higher than in the previous periods of reporting. We increased transparency by disclosing more indicators on management approach, including our corporate governance, environmental performance indicators and labour practices. This year we have issued the Report 'in accordance' with the GRI Guidelines G4 in the Core option.

In 2014 we remain strongly committed to maintaining our sustainability priorities, working with respect for the natural environment, providing a safe and fulfilling workplace for our people, and generating enduring value for our shareholders and major stakeholders in the Republic of Kazakhstan.

Damiano Ratti  
KPO General Director



# OUR PERFORMANCE AND TARGETS

Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
<b>HEALTH AND SAFETY</b>			
<b>Safety</b>			
Conduct a surveillance audit to ensure compliance of KPO's HSE MS with ISO 14001 and OHSAS 18001 standards requirements	✓	The Surveillance Audit to re-assure continued compliance of KPO's HSE MS with OHSAS 18001 & ISO 14001 has been completed successfully by the External Certification Body in September-October.	Conduct Re-certification Audit to ensure compliance of KPO's HSE MS with ISO 14001 and OHSAS 18001 standards requirements
Hold Major Hazard Awareness training for all level 2 critical safety positions	✓	KPO Senior Management attended the major accident hazard awareness workshop in Spadeadam test site in UK, followed by 3 "CryWolf" major hazard awareness workshops held locally in Aksai, which covered Level 2 Managers. Further work on major hazard awareness will continue in 2014.	Develop and agree a strategy for the Major Accident Awareness roll-out Programme to Level 3 Managers/ Superintendants
Train the remaining 15% of L1, 2 and 3 managers on Effective HSE Leadership Tour training and any additional attendees nominated by their managers	✓	Training is ongoing on 'need' basis. E-Learning is being developed.	
Complete the outstanding deliverables in the Contractor Management Working Group action plan and the Contractor Monitoring Strategy and provide supporting training to user groups	~	The Contractor HSE performance Management Strategy has been finalised.	Implement Contractor HSE Management performance review programme for high and medium risk contracts
Complete the roll-out of 'Safe System of Work' Life Saver	✓	The e-learning training was rolled out along with supporting materials.	Develop and roll out Quarterly Safety awareness campaigns for office personnel
Review the Incident Management and Crisis Management procedures; implement corrective actions following the integrated exercises held	✓	Incident Management and Crisis Management Procedure have been reviewed and issued.	

✓ - implemented; ~ - work in progress; ✗ - not completed.



Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
<b>HEALTH AND SAFETY</b>			
Continue HSE Competence Assessment of Line supervisors programme	~	STEP programme training materials were revised. 170 Operators / Supervisors attended STEP in 2013 training. Feedback sessions with line managers and superintendants are conducted. Individual reports for supervisors in scope are updated. The training and enhancement programme will be continued in 2014.	Drive focused HSE Competency Enhancement Programme for line supervisors
Hold 2 HSE Forums with Contractors	✓	2 main Contractor HSE Forums were held in 2013 covering over 40 contractor companies. Forum Themes: 'Delivering good HSE Performance' and 'KPO Contractor HSE Compliance and Performance'. These major forums were supported by smaller forums held by individual departments.	Hold one major Contractor HSE Forum
Develop H <sub>2</sub> S Field wide Emergency Response Strategy	✓	The Fieldwide H <sub>2</sub> S Strategy was formulated as part of relevant section in 2013 HSE Plan. A number of actions have been implemented to make improvements to Emergency Response. Other key Emergency Response actions have been carried-over into 2014 HSE Plan.	Implement the 2014 actions related to the Karachaganak Field Wide H <sub>2</sub> S emergency response study
Refresh the HSE Leadership Programme	✓	Guidance on HSE leadership tours was revised and issued.	
Develop HSE Risk Management Framework	~	HSE Risk Management Framework document was developed, translated and issued for comments. The document will be finalised and implemented in 2014.	Communicate and implement the KPO HSE Risk Management Framework
Adopt a Minimum Manning Philosophy within the Field	~	Minimum Manning Philosophy was developed. Cross functional project working group was established and plans developed. Implementation of the philosophy will be continued in 2014.	<ul style="list-style-type: none"> <li>■ Implement Minimum Manning Philosophy within the field for FAB and Pilot camp.</li> <li>■ Develop the plan for other field facilities</li> </ul>

# OUR PERFORMANCE AND TARGETS

Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
<b>HEALTH AND SAFETY</b>			
<b>Health</b>			
Promote the healthy lifestyle - the Healthy Heart Programme (Programme, presentations at the workplace, in Intranet, issuance of posters, brochures, bulletins)	✓	The company developed the Healthy Heart Program, which focuses on preventing cardiovascular diseases, the leading cause of morbidity and mortality worldwide. The programme has been designed for 5 years with further adjustments. A group of employees with high risk of cardiovascular diseases has been identified.	Implement the Healthy Heart program with a focus on monitoring of health of the high-risk group identified and preventive actions
Implement Health Risk Assessment (HRA)	✓	30% of positions in the company underwent Health Risk Assessment according to the Plan for 2013. The agreed Corrective Action Plan is focused on reconciling of the discrepancies found.	Conduct HRA for the next 30% of the positions; continue the monitoring of corrective measures done in 2013
Implement the annual sanitary and hygienic monitoring of working conditions	✓	The annual planned activities on sanitary and hygienic monitoring of workplace conditions agreed with the regulatory authorities were carried out in full. The report with monitoring results has been submitted to the regulatory authorities for review.	Implement the Program of sanitary and hygienic monitoring of workplaces prepared for 2014 and agreed with regulatory authorities
Implement the First aid training	✓	278 KPO employees from different departments were trained or attended refreshment courses in 2013.	
Open a Medical centre in the Pilot Camp	✓	Medical centre in the Pilot camp was opened as of Jan-2014. Medical centre is designed not only for the reception of patients and emergency aid, but also for temporary accommodation of injured persons (up to 20 people) in case of major accidents.	
<b>Security</b>			
Ensure the Pipeline security	✓	There have been no illegal taps in 2013. Rigorous patrolling and interaction with communities living along the route of the export pipeline has been continued during the year to mitigate the threat of illegal taps.	Continue patrolling of the export pipeline and engagement with the relevant communities

Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
<b>ASSET INTEGRITY</b>			
Ensure the Loss of Primary Containment (LOPC) events in accordance with Level 0 KPIs	✓	Implementation of Risk-Based Inspection (RBI) programme for static pressure equipment in accordance with industry best-practice standards coupled with our robust technical inspection programme has reduced the frequency and potential of LOPC events across all operating assets. The RBI programme implementation is well advanced, where outputs from the programme are used to optimise the inspection programme and focus resources in areas of higher probability for a LOPC event.	Continue to refine the RBI and inspection programmes to reduce the LOPC events further, with the aim of achieving 'zero LOPC' target
Present internally reviewed technical papers on various aspects of Asset Integrity at Kazakhstan Energy conference	✓	One paper presented at an international conference in Dubai focusing on the RBI programme at KPO and how it is integrated into the KPO 'sustainable operations' philosophy.	Deliver two papers on Safety Critical Element Management and Written Schemes of Examination for Safety Instrumented Systems to the Kazakhstan Energy Conference
Actively participate in KazEnergy well integrity committee (Inter-Casing Pressure (ICP) Committee)	✓	Presented proposal for updating the existing RoK national standard for the management of ICP wells to the sub-committee and main committee members. Proposal well received and currently under review.	Further enhance activity with the ICP sub-committee and seek out other opportunities to actively participate in other asset integrity-related sub-committees
<b>ENVIRONMENT</b>			
Achieve reduction of greenhouse gas emissions indicator by 70 thousand tons of CO <sub>2</sub> -equivalent	✓	Reduction in greenhouse gas emissions indicator amounted to 168 thousand tons of CO <sub>2</sub> -equivalent.	Achieve reduction of greenhouse gas emissions indicator by 201 thousand tons of CO <sub>2</sub> -equivalent
Complete wastewater treatment plant upgrade project in the field	~	Wastewater treatment plant upgrade project in the field achieved 79% complete. Final completion of works on project implementation – Q3 2014.	Complete the works on wastewater treatment plant upgrade project in the field
Conduct a study on further improvement of wastewater treatment efficiency	✓	Work was completed; report was submitted to the WKO Ecology Department	

# OUR PERFORMANCE AND TARGETS

Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
ENVIRONMENT			
Install two new automatic environmental monitoring stations (EMSs) № 016 and 017 at the sanitary protection zone (SPZ) boundary	✓	Two new EMSs were installed and put into operation by the State Commission in November 2013. New EMSs № 016 and 017 were included in the air monitoring network.	
Implement actions as planned for 2013 according to Biodiversity Action Plan: <ul style="list-style-type: none"> <li>■ monitoring of vegetation in the area of KOGCF influence</li> <li>■ satellite images review to identify changes in the ecosystems</li> <li>■ mapping of adjacent ecosystems</li> <li>■ recommendation on Biodiversity Conservation Action Plan improvement</li> </ul>	✓	In 2013 the following was completed: <ul style="list-style-type: none"> <li>■ monitoring of vegetation in the area of KOGCF influence,</li> <li>■ satellite images review to identify changes in the ecosystems,</li> <li>■ mapping of coastal ecosystems,</li> <li>■ Russian Fritillary expansion survey (listed in the Red Data Book of the Republic of Kazakhstan), processing of the field studies results is ongoing.</li> </ul>	
Complete remodeling the facility for Waste Segregation Unit # 3 and put it into service	~	Permit for construction work was obtained in September, 2013. Modification of Eco Centre's Warehouse No. 3 into Waste Segregation Unit Eco Centre was commenced.	Complete remodeling the facility for Waste Segregation Unit and put it into service
Commission five additional waste burial cells at the Eco Centre's Landfill.	✓	Construction of five new cells was completed. State Commission was held on November 15, 2013.	
Implement stage II of the study on re-use methods of waste after thermo-mechanical cutting cleaning facility (TCCF) and rotary kiln incinerator (RKI) to examine suitable options for clay cutting handling	~	Scientific research was completed to investigate re-use methods of waste after cuttings treatment at thermo-mechanical cutting cleaning facility (TCC), which indicated its potential usage as mineral powder in asphalt production for road construction. This report has been approved with the Department of Ecology and SES. This method is under implementation. Besides, preliminary laboratory studies of the methods for clay cuttings usage after treatment at TCC and RKI are in progress.	Continue laboratory research to investigate methods of clay cuttings use after processing in TCC and RKI



Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
ENVIRONMENT			
			Implement the energy management system by the end of 2014 in accordance with ISO 50001 standard
			Implement the landscaping of the areas adjacent to KPO facilities at KOGCF and SPZ; do the tree planting across the area of 33.74 ha
			Commission a scientific research for further development of the project on piled topsoil use
			Conduct a Certification audit for compliance with the requirements of ISO 14001 Environmental Management Systems
			Continue wastes recycling at cells 3 and 4 cells for storing solid wastes and waste drilling fluids
OUR PEOPLE			
Follow-up implementation of the Nationalization Plan to achieve: ■ 70% in Category 1 ■ 95% in Category 2	x	The overall number of positions nationalized in 2013 is 17, of which 8 were positions in the first category and 9 positions in the second.	Continue implementation of the Nationalization Plan to achieve 70% in Category 1 and 95% in Category 2.
Implement the Coaching Program, Start the coaching process for identified group of high-potential employees	✓	Coaching as an advanced development tool was launched in March 2013 in frames of the Enhanced Development Program. 15 participants of the Program successfully completed a series of coaching sessions in 2013.	Continue implementation of coaching sessions for 34 participants of the Enhanced Development Program

# OUR PERFORMANCE AND TARGETS

Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
OUR PEOPLE			
Agree with the Authority and develop necessary policies and procedures for the National staff retention programme; Continue implementing retention tools: ■ improving the benefits package for personnel; ■ adjusting the salaries of key KPO personnel to the market level.	~	<ul style="list-style-type: none"> <li>■ Housing allowance was implemented for employees living out of Aksai, working on shift-pattern</li> <li>■ Salaries were revised in accordance with salary market in several departments.</li> </ul>	Continue implementing retention tools: <ul style="list-style-type: none"> <li>■ improving the benefits package for personnel;</li> <li>■ adjusting the salaries of key KPO personnel to the market level</li> </ul>
Complete development of Competency Management System (CMS) software	~	CMS application launch for non-technical jobs took place in August 2013 for professional development needs identification process in budget and cost control, and contracts administration departments of the Company.	<ul style="list-style-type: none"> <li>■ Further upgrade of the CMS application.</li> <li>■ Usage of the CMS application for the repeated professional development needs identification process in HSEQ Controllershship, Legal Directorate, Marketing Directorate and HR Controllershship</li> </ul>
Complete development of CMS software for technical jobs	x	Installation of software for technical jobs has been postponed and currently with Director for review and direction.	When authorized, develop organization structure assigned standards to each role and develop reports
Execute OPITO site audit postponed to Q2 2013 and close out actions to achieve CMS Certificate of Assurance	✓	Certification has been achieved.	Complete annual audit and action if any findings
<ul style="list-style-type: none"> <li>■ Complete 75% of technical assessments.</li> <li>■ Include other personnel/ positions within Operations Directorate by end of 2013</li> </ul>	✓	75% progress achieved in early November. Investigation of contractor competency currently being done.	To complete 85% of assessments. Begin engagement of P&M Core contractors.
<ul style="list-style-type: none"> <li>■ Put in place a sustainable system with continuous improvement processes, resources, database and documentation. External audits to ensure all requirements are applied with sustainable approach</li> </ul>	✓	System includes continuous improvement by regular standardisation meetings, verification and annual external audits.	<ul style="list-style-type: none"> <li>■ Hold standardization meetings and feedback quarterly;</li> <li>■ Verify contractor competence assessments.</li> </ul>

Our targets in 2013	Target achievement (yes, no, in progress)	Actions taken and implementation status	Targets for 2014
<b>ECONOMIC DEVELOPMENT</b>			
Implement the local content issue in a process of contracts preparation: checking out Suppliers' lists, Prequalification evaluation, Plan of technical evaluation	✓	Market researches are in place to define tender bidders. The list of questions on local content for bidders is compiled in the Prequalification assessment and Technical Evaluation Plan. Assessment of bidders on the local content is performed in the process of the technical evaluation.	Maintain the achieved level of local content and continue to ensure a stable increase of local content indicators in the procurement of goods, works and services
Continue monitoring of the local content reporting	~	Monitoring of local content reporting is performed in a system of the Ministry of Oil and Gas. Monitoring of the local content commitments is performed through the signed contracts.	Ensure provision of timely reporting and data quality on local content
<b>LOCAL COMMUNITY</b>			
Issue the 2013 Social Performance Plan	✓	The 2013 Social Performance Plan was issued.	Issue the 2014 Social Performance Plan in February 2014, implementing the planned community development programmes by 100% by end of 2014
Hold quarterly Village Councils and implement community development projects in rural districts included in the 2013 Social Performance Plan	~	21 meetings of the Village councils were held involving about 600 people in 8 villages of the 5-rural districts located in the vicinity of the Karachaganak Field, as well as three Public hearings held in Aksai and Bolshoi Chagan.	Hold 16 meetings of the Village Councils in 8 villages of the 5 rural districts located in the vicinity of the Karachaganak Field, covering the issues of community concern and interest
Monitor the Grievance and Suggestions Procedure	~	In 2013 four grievances were lodged by local community members through the existing formal Grievance procedure. All of the grievances were reviewed by KPO and closed following discussions with the complainants by phone or face-to-face meetings.	Continue monitoring of the Grievance and Suggestions Procedure
Issue the 2012 Sustainability Report	✓	The electronic version of the Report was issued in April 2013.	Issue the 2013 Sustainability Report in line with G4 GRI Guidelines

# OPERATIONS AND PROJECTS

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 12% has been recovered to date.

The Karachaganak field is located in a remote and challenging working environment with the ambient temperature ranging 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 and unique. The hydrocarbons contain up to 4.5% of highly toxic and corrosive hydrogen sulphide, as well as carbon dioxide which can, in certain conditions, be highly corrosive.

Some 4,000 people work in KPO today in a talented and multicultural team. Since the signing of the FPSA, the Contractor (jointly the five Parent Companies under the Karachaganak Settlement Agreement and the Final Production Sharing Agreement) has invested more than USD 17.9 billion to develop the field, applying leading-edge technology aimed at maximizing sustainable economic value and minimising environmental impact.

## **Our products and export routes**

Most of our hydrocarbons produced are exported to maximize sales revenues. Following commissioning of the fourth liquid stabilisation train at the KPC, 92% of liquid production in 2013 was exported as stabilised condensate to Western markets via the Caspian Pipeline Consortium (CPC) pipelines and Atyrau-Samara pipeline via the Transneft system. The CPC pipeline delivers KPO product to the Black Sea port of Novorossiysk. The Atyrau-Samara pipeline brought it to the Baltic Sea ports of Primorsk and Ust'-Luga in 2013. The remaining liquids were exported as unstabilised condensate to Russia via Orenburg or delivered to the local market.

The gas produced from the field is re-injected into the reservoir to help maintain reservoir pressure, sold as raw gas under long term contract to KazRosGas, or sweetened (i.e.

hydrogen sulphide is removed) to generate electricity for the KPO facilities and for local companies LLP Aksaienergo and LLP Batys Energoresursy.

In 2013 KPO delivered 8.2 billion cubic meters of gas to Orenburg – a record volume of gas for a shutdown year. In addition KPO re-injected 8.6 billion cubic meters of gas into the reservoir in order to maintain the pressure and increase the recovery rate of the liquids from the reservoir in future years. The injection is also record volume for a shutdown year.

Via its partnership with KazTransOil, KPO became the first Kazakh shipper to obtain a storage services contract on the Transneft's system, and as a result was able to complete a full vessel loading via the Atyrau-Samara export route. The full vessel loading proved a great success attracting a high number of bidders and a premium price compared with the international price benchmark (Urals).

The new export route to Ust'-Luga, opened in 2013, has allowed KPO to expand the market for stabilized oil, thus increasing the potential revenues.





*In the KPC Control Room*

## Our export routes



# OPERATIONS AND PROJECTS

## 2013 OPERATIONS

In 2013, KPO produced 136 million barrels of oil equivalent (BOE) in the form of stable and unstable liquids, sour gas, and sweet gas for use as fuel and excluding gas injected

in the reservoir. Delivery of gas has reached over 8 billion cubic meters, which is the highest historical record of KPO in a shutdown year. Over 8.5 billion cubic metres of dry sour gas was injected into the reservoir, a volume equivalent to almost 50% of the total gas extracted.

Table 1. Production in 2013		2011	2012	2013*
<b>Total Production</b>	Mboe	138.5	139.5	136.0
<b>Total equivalent stable oil</b>	kt	10,854	11,014	10,492
<b>Total gas production</b>	Mscm	16,868	17,519	17,531
<b>Gas Injection</b> Not included in total production, as this is not sold	Mscm	8,129	8,666	8,570
<b>Sweet Gas</b> used at KPC for internal needs	Mscm	620.0	660.0	637.8

\* Shutdown year

Table 2. Sales in 2013		2011	2012	2013
<b>Total Sales</b>	Mboe	133.6	134.4	132.1
<b>Unstable Liquids</b> Condensate to Orenburg Gas Plant and Mini Refinery	kt	1,498	850	914
<b>Stable Liquids</b> Oil and stabilised condensate to CPC and Atyrau-Samara	kt	9,542	10,246	9,700
<b>Raw Gas</b> to Orenburg Gas Plant	Mscm	7,974	8,039	8,197
<b>Sweet Gas</b> to the WKO community	Mscm	130.9	130.4	98.7



KPC view

## SHUTDOWN

One of KPO's targets is to ensure the technical sustainability of the Karachaganak operational facilities. The agreed KPO Shutdown Strategy is based on the requirement to carry out statutory and mandatory inspections of plant and machinery as well as the tactical and strategic planning of the shutdowns to ensure the execution of major work programmes that cannot be carried out during normal operation. The shutdown is also used as an opportunity within KPO to improve production optimisation, carry out engineering modifications, implement Project Development activities and execute non-routine maintenance.

The 2013 shutdown scope was important to KPO's future shutdown strategy as it demonstrated KPO's ability to execute consecutive train shutdowns, whilst maintaining production. It also demonstrated that common system vessel inspection and Pressure Security Valve (PSV) testing frequencies can be extended through risk based integrity analysis. The net effect of this shutdown strategy is to reduce the overall length of time required for shutdowns and thus increase the safe production of the field.

The shutdown activities during 2013 included KPC, Unit 2, the Gathering system and Unit 3. The scheduled activities were implemented safely and efficiently. Implementing the new shutdown strategy has allowed KPO to achieve the highest historical production efficiency (85.7%) in a shutdown year.

## KARACHAGANAK OPERATING FACILITIES

### An interconnected system

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. As of end 2013, 94 producing wells and 17 sour gas re-injection wells were online at Karachaganak, with a total well stock of 388 wells.

### KPC

The Karachaganak Processing Complex (KPC) processes oil condensate from 44 production wells as well as feedstock

transported 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.

In 2011, KPO completed the 4<sup>th</sup> Train Project which added a fourth liquids stabilisation and sweetening train to the Karachaganak facilities and included the expansion of the existing Karachaganak Processing Complex inlet facilities, 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.

### Early oil production satellite (EOPS)

EOPS was installed and commissioned in 2000 to evaluate the performance of wells drilled into the oil-rim. EOPS was originally tied into Unit 3, but was redirected to KPC following commissioning of the KPC facilities.

### Unit 3

Unit 3 facility, operating since 1984, separates and partially stabilises gas and oil condensate from 28 incoming wells before exporting via pipeline to a processing facility at the Orenburg Processing Plant in Russia.

### Unit 2

Unit 2 is a multi-functional facility introduced in 2003. It is able to separate, process and re-inject high pressure sour gas. It produces partially stabilised oil, which it sends for stabilization at KPC prior to export. 21 incoming production wells feed Unit 2.

Unit 2 includes leading-edge technology, with one of the highest pressure sour gas injection systems in the world. Three compressors are capable of injecting gas at a pressure up to 550 bar with a high H<sub>2</sub>S content of up to 9%.

This gas injection scheme has increased the sustainability of the Karachaganak field through the provision of partial pressure maintenance, improving liquid recovery and also eliminating the need to extract and store sulphur, delivering important environmental benefits to the region.

# OPERATIONS AND PROJECTS

## Eco Centre

The Eco Centre is a world-class waste treatment facility combining five operational units dedicated to treatment of oil and gas drilling and production wastes:

- Thermo-mechanical cuttings cleaning facility enabling 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 workover 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;
- Landfill commissioned in 2011 ensuring safe disposal of solid waste with a total of 12 waste burial cells commissioned;
- New general purpose incinerator launched into service in 2012.

## Karachaganak Atyrau Transportation System (KATS)

KATS is the main export route for stabilised liquid hydrocarbons production at Karachaganak and has been in operation since 2003. The transportation system consists of a 24 inch buried pipeline from the Karachaganak Processing Complex to KPO Atyrau Terminal. There are two pumping stations: one at KPC, which is an intermediate transfer station, the other at Bolshoi Chagan, which is the main pumping station; and a receiving and storage facility in KPO Atyrau Terminal. In Atyrau, the line connects to the Caspian Pipeline Consortium (CPC) system which transports oil to Novorossiysk on the Black Sea, where it is loaded on tankers and exported.

KPO operates and maintains all of these facilities.

## Karachaganak Orenburg Transportation System (KOTS)

KOTS consists of five pipelines, 140 kilometres in length that transport hydrocarbons from the Karachaganak field to the Orenburg Gas Plant in the Russian Federation. These pipelines were in existence prior to the second phase of

Karachaganak's development. Two pipelines of 28 inches in diameter transport sour gas to the Orenburg Gas Plant for further treatment. In addition there are three 14 inch lines of which one is a liquid export line and two are dual service and transport either unstabilised liquid or sour gas.

## PROJECTS AND DEVELOPMENT ACTIVITIES

KPO undertook the following major activities during 2013:

- The equivalent of 7 new wells was successfully drilled, and 5 of these wells were hooked up;
- The programme of well workovers to optimise production and re-injection in the field continued;
- Construction works commenced on the GoR Gas Balancing Project to connect KPC and Unit 2 and further increase liquid hydrocarbons recovery;
- The capital works to upgrade the facilities in line with the asset integrity, being a focus area, continued;
- Short and medium-term programme of work continued to enhance safety at Unit 3, an ongoing focus for the venture;
- Capital projects associated with the 2011-2013 Environmental Protective Measures Plan (EPMP) were executed;
- Construction was completed on the last two Environmental Monitoring Stations of the 2011-2013 EPMP and the facilities were commissioned;
- Implementation of the concept selection studies for Plateau Extension Projects aiming to maintain the high current levels of production in accordance with the approved 2011 Field Development Plan (FDP) was continued;
- The appraisal for the Western Area Early Development (WAED) consists of: (a) new drilling well and successfully sidetracking the well to a location where significantly better quality reservoir was found; and (b) sidetracking well 9834 (originally drilled in 2012) from a location where reservoir quality was poor to a new location where again significantly better reservoir was encountered. Both wells will be completed and stimulated in Q1 2014.





*Shutdown activities in the Karachaganak field in 2013*

KPO's driver is to fulfil its obligation under the FPSA it has with the Republic of Kazakhstan to continue the development of the Karachaganak Field. We continued examining a series of short-term development opportunities to enhance production between the current stage of the field development. In particular, the following projects were further developed:

#### **KPC Gas Debottlenecking Project (KGDBN)**

KPC Gas Debottlenecking Project is designed to manage the increased volumes of gas produced from the field as the gas oil ratio (GOR) increases over time. In 2013 the project progressed through the selection of the most suitable size and is now developing the selected concept through the development of the pre-FEED Design.

#### **Western Area Early Development**

The Western Area Early Development Project is part of the staged Plateau Extension development of the Karachaganak Field. Its primary objective is to extend the liquid plateau production by drilling 6 wells in the relatively undeveloped Western area of the field, installing a remote manifold station and connecting trunk lines and test lines to KPC. The project is currently in Concept Definition phase, and is planned to enter into Execution Phase in Q2 2014.

#### **Unit 3 Future Development (U3 FD)**

Unit 3 is an aging plant which does not meet the safety or asset integrity standards required of a modern international production facility. Unit 3 Future Development programme has been set up in order to develop a strategy for the replacement or refurbishment of the existing plant in order to meet current international standards of safety and asset integrity, whilst still maintaining production. A feasibility/concept selection study has commenced to select the most appropriate concept.

#### **Unit 2 Gas Injection Upgrade**

Unit 2 Gas Injection Upgrade is also part of the Plateau Extension Projects. Its aim is to upgrade the existing Unit 2 Gas Injection infrastructure to optimize the gas reinjection system of the Karachaganak Field by reducing downtime

and increasing availability, reliability, flexibility, and gas reinjection capacity. The Project is currently at the Concept Selection Stage, with FEED planned after Q2 2014.

#### **Karachaganak Expansion Project (KEP)**

The Contractor is also continuing the phased development of the Karachaganak field in the longer term as consistent with its obligations under its agreement with the Republic of Kazakhstan, via the Karachaganak Expansion Project (KEP).

The concept assessment and selection activities for KEP included the development of a quantitative risk assessment (QRA) model to evaluate the risk exposure of personnel during the construction and operation of the proposed new facilities. The outputs from the model have been used to ensure that the layout, segregation and design of the new facilities will reduce risks during these activities to the lowest practicable level.

A segregated Gas Reinjection Compression Station (GRCS) will be separated from the main KEP facility taking operational risk into account. These design features will increase inherent safety in the design and reduce the exposure of personnel to process safety risks (including toxic gas risks) throughout the life of the new facilities. KEP is also seeking to utilise technology solutions that will minimise operator attendance, and so risk exposure, at process facilities.

Environmental impacts from the proposed new KEP facilities are being managed by the adoption of best available techniques (BAT) and air dispersion modelling of KEP emissions is being undertaken to assess any impact on the boundary of the Sanitary Protection Zone (SPZ) around the field. Current work suggests that the SPZ will not need to be extended for KEP stage 1.

#### **ASSET INTEGRITY MANAGEMENT**

The active and robust management of the functional, mechanical, and operational integrity of the complex, capital-intensive assets such as found within KPO's Karachaganak Field is fundamental to the long-term sustainability of KPO's business.

# OPERATIONS AND PROJECTS

As the KPO's operating assets transition into the second half of the design life cycle, asset integrity management becomes more central to its vision of a sustainable business. In recognition of this transition, the Directors of KPO have initiated a programme for embedding the core principles of asset integrity and process safety across the organisation. Through the Process Safety and Integrity Management (PSIM) Standard, the KPO Directors have articulated a clear vision of the asset integrity principles that will provide the foundation for robust, sustainable business operations for the next phase of the KPO venture.

After articulating the vision for Process Safety and Asset Integrity at KPO, KPO formed the Asset Integrity group, which has the primary function of embedding the PSIM principles in the company. In addition, the Asset Integrity group supports the transition of the wider KPO organisation in changing behaviours and work processes that align with the PSIM principles. Since its initiation in mid-2010, the PSIM

Standard has provided a framework from which grew a number of programmes to further integrate the risk-based approach, or goal-setting philosophy, to achieving robust, sustainable operations. This approach is considered a 'best practice' throughout the international upstream oil & gas industry, where the consistent and thorough integration of such a philosophy has resulted in a strengthening of the three pillars of sustainability – i.e. Environmental, Social, and Economic.

The process of embedding the principles articulated in the PSIM Standard can be compared to a 'corporate culture change' initiative. As with changing an organisation's culture, PSIM principles embodies a new way of thinking in terms of asset management and problem solving, whilst balancing short-term solutions with long-term strategic vision. One of the principal elements of PSIM is a robust, formal change management system process, namely Operations-focused Brownfield Management of Change (BFMOC).



*KPC condensate storage tanks*





*At the Drilling Rig #258*

To further enhance the value potential associated with the BFMOC process, Asset Integrity has conducted internal workshops with the Operations, Maintenance, Engineering and Projects Execution groups, where the focus of the workshops was providing clear links to the respective work processes for each group and where the BFMOC process enhances the overall integrity of the KPO assets. In addition, the Asset Integrity group conducted informal training and seminar sessions with the Contracts & Procurement (Corporate) and Contracts Management (Operations), both jointly and individually, to begin the process of growing an understanding and recognition of the true value to the KPO business that can be achieved with the application of robust asset management practices. Finally, the KPO Engineering group has sponsored PSIM-focused workshops with primary engineering contractors and the Corporate Risk group has delivered process safety awareness training to some 300 middle managers via a bespoke, interactive 'live-actor' format utilising the acting talents of KPO employees.

As external outreach is equally as important as internal, KPO continues to actively participate in Well Integrity Working Group of the KazEnergy Industrial Consortium along with its regular active roles within the large KazEnergy organisation. Recently the KPO Well Integrity team submitted a proposal to the KazEnergy working group that would standardise the approach to managing the risk associated with wells operating with inter-casing pressure. In addition, KPO has submitted an expression of interest to the KazEnergy group regarding its willingness to lead or actively contribute to a number of identified R&D needs for the Kazakhstan upstream oil & gas industry.

The vision of the KPO senior management team is clear – a robust asset integrity programme is central to the sustainability of KPO's business. It is thus equally clear that the initiatives described above will continue into 2014 with further enhancements and a wider audience. Furthermore, the corporate culture change process begun in 2013 is anticipated to gain momentum with the integration of support personnel and 'Lessons Learned' from Operator Company experts. Finally, the Asset Integrity group will continue its focus on providing functional support and assurance against the PSIM Standard, thereby continuing to strengthen KPO's triple bottom line.



*At the Karachaganak field*

# STAKEHOLDER ENGAGEMENT

Stakeholder engagement is essential for KPO sustainability and success.

We hold a strong commitment to stakeholder engagement and our identified major stakeholder groups, including our shareholding companies, the Authority of the Republic of Kazakhstan (RoK), the RoK Regulatory authorities and Ministries, employees, trade unions, contractors, business partners and associations, media, NGOs and local communities.

KPO has appropriate policies and procedures governing our stakeholder engagement practices.

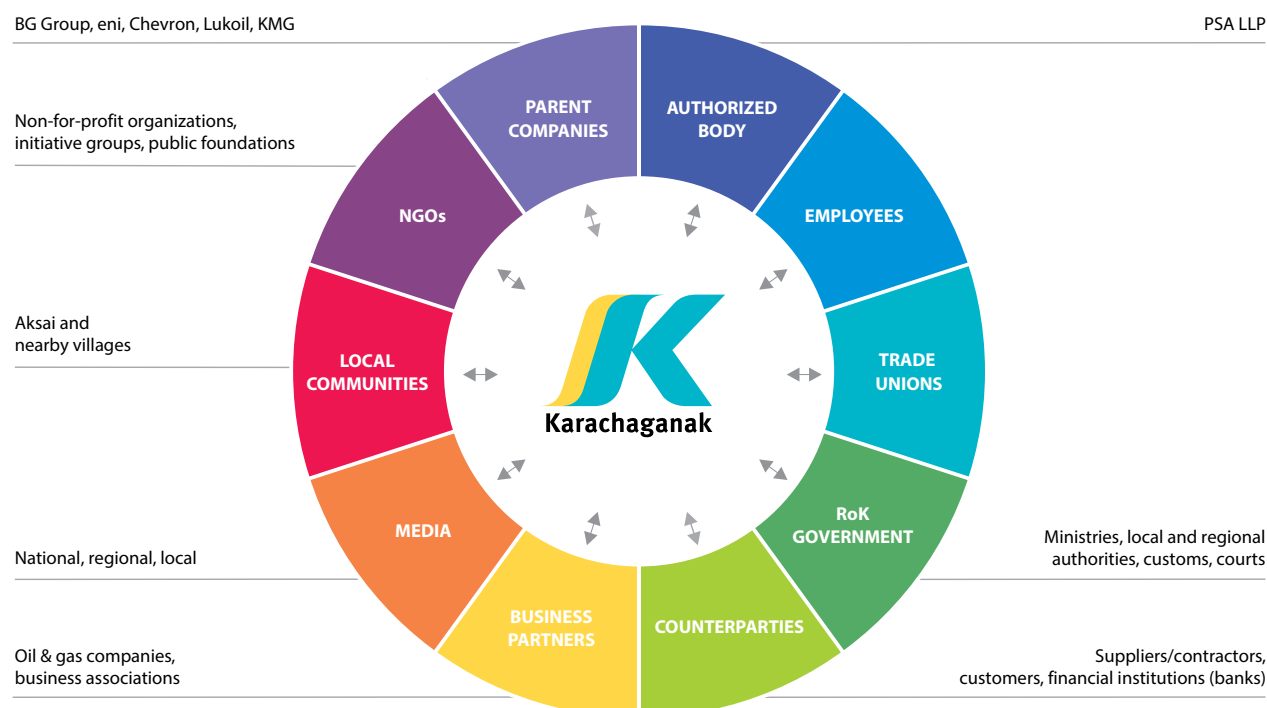
The KPO's Corporate Communications Policy outlines the mechanisms and processes that KPO uses at a corporate level to communicate internally and externally. It also provides lists of stakeholders with an indication of who within KPO is authorised to engage with external stakeholders.

Processes with other relevant stakeholders are determined by several policies and procedures, such as the Stakeholder Engagement Operating Procedure, the Sponsorship and Donations Policy, the Internal Communications Policy, the Memorandum of Understanding (MoU) between KPO, the Burlin Region Maslikhat and the Burlin Region Akimat on establishment of Village Councils in Communities located around the Karachaganak Field and the Local Content Development Programme.

We developed our Stakeholder Engagement Operating Procedure which is based on the International Financial Corporation's (IFC) principles requiring that we engage with our stakeholders in a meaningful, informed, free and localized manner.

The major groups and sub-groups of our stakeholders are presented in the chart below.

**Graph 1. Our stakeholders**







At the EXPO 2013 in Uralsk

The following illustrates our engagement with the key stakeholder groups during 2013:

**Regulatory authorities and Ministries** – we provide reports and regularly meet with authorities to ensure compliance with the RoK environmental and labour legislation. Participation in working groups and the round tables/conferences organised by relevant Ministries identified key topics of our engagement, including GHG emissions, improvement of performance and effectiveness of collaboration with stakeholder groups, engagement of potential suppliers, etc.

**Employees** – we are constantly working to promote sustainability issues across the company amongst our employees disseminating our sustainability report, providing e-learning on sustainability and conducting a workshop on fundamentals of sustainability and reporting to relevant Departments. Some 30% of the Company employees participated in this training. About 30 employee concerns and grievances related to pay grades, labour relations and working conditions have been reviewed and closed during the year. We also

held a Welcome Day for the newcomers, who joined the Company in the past year. Welcome Days are becoming a good tradition in KPO helping the new employees successfully integrate into the business.

**Trade Unions** – we strive to build effective relationship with the unions. We met with the unions during 2013 to discuss the issues raised by our employees concerning their working conditions, pay grades and benefits. Bike rides along the route Aksai-Orenburg and other sports competitions on mini-football, table-tennis were held jointly with the unions engaging the KPO employees.

**Contractors** – we attend a number of business forums at a national, regional and local level to engage our existing and potential contractors to ensure compliance with international standards pertaining to worker safety and environmental requirements. To ensure transparency of our procurement system we placed our Annual, Mid- and Long-Term Procurement Plans on our web-site. The two HSE forums held with our contractors aimed at improving communication and understanding by contractors of company procedures and raising environmental awareness.



At the meeting dedicated to the signing of the trilateral Memorandum of Understanding in the area of corporate social responsibility

# STAKEHOLDER ENGAGEMENT

**Communities** – we engage our communities in a dialogue through public hearings and our regular Village Councils held in our area of direct impact. The key topics raised by communities at these meetings are the issues related to improvement of infrastructure, repair of roads and water supply system, employment and air quality monitoring. We managed to address these issues by implementing our Social Performance Plan, focusing on educational, health, cultural and social programmes. Our Security and Emergency Response teams proactively engaged with communities residing along the Karachaganak-Bolshoi Chagan-Atyrau export pipeline to inform them of KPO operations and transportation system raising community awareness. Such engagement with local communities resulted in a reduction of the number of illegal taps on our export pipeline.

**NGOs** – we build positive relationships with local and regional non-for-profit organisations supporting and

contributing to various charity events and replying to their concerns. Under our Annual Best HSE Performance Award Programme, three public foundations of West Kazakhstan Oblast and Burlin District were donated with vouchers worth \$2,000 each for charity programmes.

**Membership in Associations** – we view our membership in associations such as the Kazakhstan Association of Subsoil Users and Sustainable Development and the Kazakhstan Petroleum Association (KPA) as strategic, because it provides us with opportunities to network with other members of the association and access to its resources. Our membership allows us to participate in Working Groups and Committees on key business issues. We actively participated in a Well Integrity Working Group of the KazEnergy Industrial Consortium and expressed our interest to lead or actively contribute to a number of identified R&D needs for the Kazakhstan upstream oil & gas industry.



*KPO participated at the Forum for Services and Machine Engineering in Oil and Gas Sector*





*Prime Minister of the RoK visits the Karachaganak Field*

## **MATERIALITY ISSUES**

Analysis of the guidance given in the Global Reporting Initiative's G4 Guidelines, review of our corporate risks register and engagement with our key stakeholder groups helped us shape the contents of our report and identify the following issues material for KPO:

- Human Rights
- Ethics and Compliance (also material for our contractors)
- Workers' Safety and Security (also material for our contractors)
- Workers' health protection
- GHG emissions reduction
- Waste management

- Biodiversity
- Water use
- Energy management
- Personnel development and training
- Nationalisation
- Local content
- Supporting development of local communities
- Contribution to local economy

These issues are covered in this report.



*Seminar of the KPO Leadership team*

# CORPORATE GOVERNANCE

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.

Since 1997, the Karachaganak Field has been developed and operated by Agip and BG, with principal operating functions being delegated to Karachaganak Petroleum Operating B.V. ("KPO"), an operating entity owned by the five oil companies that constitute the investors (known individually as "Contracting Companies" and together as the "Contractor") who are party to the Final Production Sharing Agreement ("FPSA") with the Republic of Kazakhstan. The Participating Interest stakes are BG Group (29.25%), eni SpA (formerly Agip) (29.25%), Chevron Corporation (18%), LUKOIL (13.5%), and KazMunaiGas (10%) (in 2012, KazMunaiGas, represented by KMG Karachaganak Limited Liability Partnership, acquired a 10% stake in the Contractor).

The FPSA places responsibility for the field development on the Contractor until January 2038. The above-mentioned five companies constituting the Contractor pool their combined international experience so that the maximum value can be realized from the Karachaganak Field.

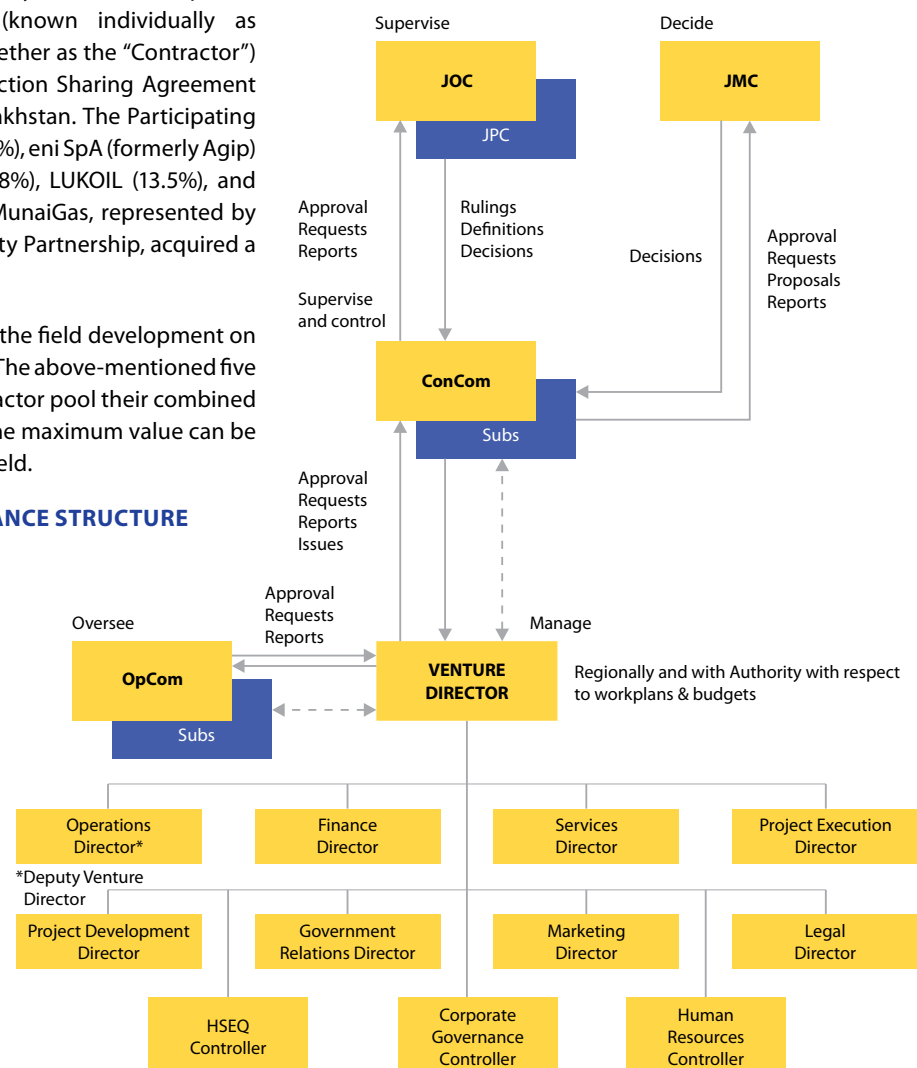
## ORGANISATION AND GOVERNANCE STRUCTURE

Our organisational structure has been designed to help us meet our business objectives and fulfil our obligations vis-à-vis the Republic of Kazakhstan.

The FPSA establishes two committees: the Joint Operating Committee ("JOC") and the Joint Marketing Committee ("JMC"). Both committees are formed from representatives of each of the five Contracting Companies and an equal number of members designated by the Authority (currently PSA

LLC) under the FPSA, which represents the Republic of Kazakhstan. The Contractor and the Authority have equal voting rights. All decisions require a unanimous vote.

**Graph 2. Karachaganak Venture Senior Management Structure**





By the Field Administrative Building at KPC

## JOC – JOINT OPERATING COMMITTEE

The JOC is responsible for the *overall supervision* of Petroleum Operations and Social and Infrastructure Projects. Matters pertaining to the JOC include review and approval of the annual Work Program and Budget, Social and Infrastructure Projects, and any changes to the Field Development Plan. JOC meetings take place at least twice a year.

The JOC is chaired by a representative from amongst the Authority's members. The KPO General Director and his Deputy have the right to participate in the work of any JOC meeting, but do not have voting rights.

JOC members are remunerated by their respective companies and selected by the senior management of each participating entity based on each candidate's individual experience and respective companies' policies.

The Joint Procurement Committee ("JPC") is a sub-committee established by the JOC, which is responsible for the approval or endorsement of all Major Contracts to be awarded by KPO, and acts in accordance with the JOC Tender Procedures as approved by the JOC. Membership and voting rights for the JPC are similar as for the JOC, and its decisions also need to be unanimous.

## JMC – JOINT MARKETING COMMITTEE

The JMC is responsible for all the activities relating to *the marketing of hydrocarbon and non-hydrocarbon products*. This Committee approves proposals concerning transport, processing, swap and sale of petroleum products. Decisions are taken with the objective of maximising net revenues.

## CONTRACTORS' COMMITTEE

The Contractor's most senior management body is the Contractors' Committee ("ConCom"). The ConCom is responsible for the determination of the Contractor's position on any issues to be discussed and voted upon at the JOC and JMC.

Membership of the ConCom is comprised of representatives from each of the five Contracting Companies with KPO management in attendance. All decisions are made by the affirmative vote of the Parties having individually or in the aggregate a Participating Interest of not less than 90%.

A number of sub-committees also meet regularly during the year to assist and advise the ConCom in specific areas of expertise.

The ConCom currently has the following sub-committees:

- Finance
- Tax
- Legal
- Audit
- Work Program and Budget
- Insurance
- Government Relations and Communications
- Contractor's Marketing Committee ("CMC")

The next level of the management body is the Operating Committee comprising representatives of the operator companies: BG and eni.

A number of sub-committees also exist to support specific areas of expertise, such as HR, HSE, Security and Sustainability. The General Director, the Operations Director and other directors of KPO are nominated by their respective Parent Companies. The roles of KPO senior directors are rotated on average every three years between BG and eni.

## MANAGEMENT SYSTEMS

In all aspects of its activities and in accordance with the FPSA, KPO operates to internationally recognized standards which are implemented in KPO 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.

Our Occupational Health and Safety Management System and Environmental Management System are certified to comply with the OHSAS 18001 and ISO 14001 standards respectively.

In 2009, following intensive work conducted by the Operators Sustainability Working Group, KPO issued its



# CORPORATE GOVERNANCE

Sustainable Development Charter. This Charter is intended to lay the foundations and set the guiding principles for the 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 externally at [www.kpo.kz](http://www.kpo.kz), and to employees on the company's intranet.

## RISK MANAGEMENT

Within KPO there is a formal Risk Management process to identify and effectively manage the business risks facing the Company. This process as well as roles and responsibilities are defined within the Risk Management Manual. Corporate Governance Controllershship facilitates the risk management system in place and is responsible for maintaining the Corporate Risk Register which contains the risks and associated action plans and controls in place for all risks facing KPO at a Company level. The top Corporate risks are reported to and discussed by the KPO Risk Committee meetings. After each Risk Committee, the Corporate Governance Controller provides the ConCom with the quarterly Risk Register Report which details the top risks facing KPO.

Due to the nature of our business, sustainability risks are of primary importance for us. Such risks include management of alignment with stakeholders regarding Karachaganak development, personnel safety and asset integrity risks, environmental risks that may be related to accidental loss of containment, environmental compliance and permitting issues, ethical compliance risks, attracting and retaining qualified national personnel, and related reputational impacts. We regularly review these risks at our Risk Committee and aim to identify and implement measures to reduce their likelihood and impact.

## SUSTAINABILITY

We also see significant opportunities for us in developing national personnel, attracting and supporting qualified local suppliers, and aiding the social development of regional communities. Preparation of Sustainability reports

for the last 5 years has been a learning opportunity for KPO, as it has improved interdisciplinary cooperation within KPO, engagement of the KPO senior management in issues around the long-term sustainability of the business and raising internal and external awareness of good reporting practices in accordance with the GRI Guidelines. The overall reporting process contributes to regular improvement of business processes and helps us gain a more holistic understanding of our organization.

## ASSURANCE

All these systems and policies are subject to an annual audit program, which provides assurance to the KPO management and the contracting Companies that effective and efficient processes are in place to identify and manage risks, including sustainability risks, and to ensure compliance with approved processes. Internally, assurance activities are undertaken by the Internal Corporate Audit group. Specific areas are identified for audit each year using KPO's internal risk management process, discussions with directors, Contracting Company requests and KPO's own Audit Model, which details KPO process areas and the required audit frequency for each area.

During 2013 our governance and assurance programs delivered over 35 assurance reviews, assists and workshops, 3 capital project forums and 10 internal audits.

External assurance reviews also occur on a regular basis, including an annual Contracting Company Audit to give assurance that KPO complies with its own policies and standards and industry best practices, and regulatory reviews to ensure compliance with the applicable Kazakh legislation. The 2013 Contracting Company Audit was conducted in November 2013 and reviewed such areas as Legal Compliance, Delegation of Authority, Finance, Human Resourcing, Contract Management, Project Management, Inventory Management, and Information Technology.

## COMPLIANCE FRAMEWORK

### Code of Conduct

The Compliance Framework regulates and provides guidance on all aspects of Compliance throughout the



View at KPC

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 introduced in September 2012. Our core values are set forth in the Code of Conduct as follows:

*"KPO is a complex organisation which employs personnel of various nationalities and cultures. Maintaining and enhancing KPO's reputation requires that all of us work and behave to high standards both in dealing with each other in KPO and with the outside world.*

*Achieving outstanding performance in the long term delivery of our business goals can only be achieved, if we are an organisation where everyone's behaviour conforms to a set of principles of high standard and sustainability.*

*Our success must be based on high levels of integrity in our business relationships, with best practice applied in providing safe and secure working environments, where everyone is given opportunities to develop and all are treated fairly in a transparent and rewarding environment.*

*KPO will always seek to play a responsible and constructive role, aligning its business objectives with the aspirations of the communities within which it operates. Different cultural and social features will be respected and considered as a major part of our values. We have respect for and manage our impact on the environment and the society in which we work, and will ensure that a consistent and fair approach is applied in our dealings with stakeholders, service providers and customers."*

The Compliance Framework is managed by the Legal Compliance Counsel and Compliance Coordination Manager, both of whom report to the Legal Director.

KPO has a Compliance Committee, which is chaired by the Legal Director and attended by the General Director,

and other members of the KPO senior management. The Committee meets quarterly and oversees all matters relating to Compliance in KPO. The Committee reviews the actions of the Legal Compliance group and approves the actions and reports of the Legal Compliance Counsel, or may refer the matter/report back for further action.

The Compliance Committee reports all relevant matters to the Operator and the Contracting Companies through various committees, including the Audit Sub-Committee.

When contracting with vendors, suppliers or other sub-contractors, the KPO Code of Conduct is attached as part of the contractual documents to inform the business partner of the standard of ethical business KPO sets in its business relationships.

### Training

During 2013, classroom-based training was provided to 307 employees, including all new starters, on the Code of Conduct and other Compliance requirements. The objective is to instil a culture of ethical behaviour in KPO, ensuring that each KPO employee knows what is expected of him or her as a KPO employee. This training involved classroom based sessions lasting about 1.5 hours each, with an average class size of 13 employees.

The Compliance Department also provided anti-corruption training courses for employees in various departments. These have covered Contracts & Procurement, Warehouse and Logistics, Travel Section, Visa Section and Transport Departments' personnel. KPO wants to ensure that every employee is aware of the risks of facilitation payments and bribery.

It is an annual objective of KPO to ensure that all employees are made aware of their individual obligations under the Code of Conduct. A set of policies are placed on the KPO intranet for each employee to read and acknowledge as having read the policies. Employees who do not have access to the intranet are provided with hard copies and a signed acknowledgement is obtained. By the end of November 2013, the online Compliance Declaration had been confirmed by all KPO employees.

# CORPORATE GOVERNANCE

During September 2013, KPO conducted an Ethical Compliance Workshop for 15 of our major contractors, who represent approximately 70% of all the work done for KPO. The workshop was attended by 34 senior company representatives. Two presentations on Ethical Compliance were provided, and included a presentation on the KPO Code of Conduct. It is our objective to continue the training sessions into 2014 and cover as many of the remaining contractors as possible. This action is to promote the understanding of our Contractors, of the reasons for KPO's insistence on creating a fair and equitable business environment where the ethical business principles set forth in the KPO Code of Conduct are the foundation for all its relationships.

## Hotline and other compliance measures

As was mentioned in our previous sustainability report, in 2012, a toll-free, anonymous and confidential Hotline was introduced in KPO as another step in the Company's legal compliance programme. An agreement with an accredited international supplier of this service was signed with KPO.

This Hotline is available 24-hours a day for employees to report potential legal or ethical offenses, including discrimination, sexual harassment, conflicts of interest, safety or environmental violations and/or improper financial practices or bribery. The caller is allowed to choose between a telephone report and a written account of the misconduct. KPO is then provided with the report from the caller, which report is then duly considered by the Legal Compliance Counsel and Compliance Coordination Manager to determine the appropriate action. A report of the action is provided to the hotline provider to allow feedback to the caller.

During 2013, KPO received 66 reports on the Hotline (with some duplication), which were duly considered and the appropriate action taken. Most of the complaints related to Human Resources issues and these were addressed in accordance with KPO's Grievance Handling Procedure and Discipline Handling Procedure, depending on the nature of the situation.

Those matters that related to misconduct were investigated in terms of the Compliance Assurance Investigations Guidelines and the reports were provided to the Compliance Committee. Some of the investigations are still ongoing.

With the implementation of the Hotline, KPO met one of the measures of international recognition for combating bribery and corruption. The Hotline also provides an important forum for KPO's employees and contractors to ensure a fair and safe working environment.

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

In 2013, KPO introduced the Political Consultants and Intermediaries Policy and the Self-Assessment Policy. The first policy prohibits the use of such individuals to interact with any governmental department on behalf of KPO. The second policy ensures a process whereby KPO determines the compliance risks encountered in its business through the year to decide whether the existing policies and procedures cover the particular risks adequately. If any additional risks were identified, the Legal Compliance Counsel will amend the policies and procedures to ensure the risks are mitigated.

## Anticorruption due diligence process

Due to the fact that the KPO's shareholders are international integrated oil companies and obligated to comply with international laws applicable to their home countries, KPO also has to comply with the following legislation:

- The Kazakh legislation on bribery, encompassing three types of responsibility for receiving/giving a bribe, as well as mediation in bribery;
- RoK Criminal Code - Articles 231 (commercial bribery), 311 (receiving a bribe), 312 (giving a bribe) and 313 (mediation in 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; and
- UK Bribery Act, 2010.

Accordingly, KPO seeks assurance that all business partners, suppliers, vendors, contractors and service providers also adhere to ethical business practices.

KPO and its counterparties – vendors, suppliers, agents, freight forwarders, sub-contractors, etc., are obliged to comply with the applicable Kazakh laws and compliance legislation of the home countries of the Contracting Companies and these obligations are incorporated in KPO's standard contracts.

In order for KPO to meet these challenges and requirements, we need the cooperation and support of our business partners. One of the key areas of concern is the prevention of corruption, bribery and money laundering.

A key way we do this is to “know our business partners” and to request that our partners provide certain information with regards to their undertakings in respect of their activities and operations. For this purpose, KPO has introduced the Ethical Due Diligence programme to determine the risks associated with each of its potential business partners and to introduce mitigation measures to those aspects that may pose a risk. A questionnaire is sent to each company in question, to provide information regarding its ethical business practices. This information is used to carry out a risk assessment. KPO also uses international databases to confirm the company's corporate information and whether there are any negative reports regarding its business conduct.

To date, a large number of companies have been assessed, and KPO is confident that the process has alerted our contractors, suppliers and vendors to KPO's high standards of ethical business.

As part of KPO's implementation of this process, KPO also assists local companies to comply with KPO's ethical requirements. The Contract & Procurement Department provides local companies with *pro forma* documentation through which they are able to draft their own Code of Conduct and revise their contractual documents, including those that could be used for subcontracting services, or for the procurement of equipment or materials.



KPO employee at the KPC

# 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 SYSTEM

Since the initial certification of HSE Management System in 2008 at KPO, re-certification audit was conducted in 2011 and a number of surveillance audits, the last one was in October 2013. Those audits, conducted by independent certification body, confirmed KPO's compliance with the requirements of ISO 14001 and OHSAS 18001 standards.

Managing the risks remains crucial for KPO. Following the revised approach on asset integrity and industrial safety, in 2013 KPO progressed on embedding the Process Safety & Integrity Management framework across the organisation. The activities implemented throughout the year 2013 are presented in detail in section Asset Integrity.

In line with the KPO HSE Policy, the top management commitment to guarantee a safe work place is strengthened by the following commitments of line management and employees:

- Every line manager is fully committed to being a HSE leader, ensuring the knowledge and application of HSE requirements and acting with the aim of protecting the health and safety of employees and contractors and preventing environmental pollution.
- All employees and contractors recognise their personal responsibility for HSE and the right to openly report any HSE issue of concern. Everyone is encouraged to intervene in the event of unsafe acts or conditions and polluting circumstances, and is empowered to stop the work if necessary.

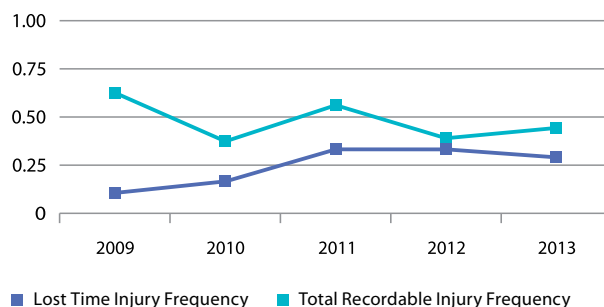
To assure HSE processes are followed rigorously, KPO conduct regular assurance reviews, both internally and in contracting companies. In addition, Operator Companies conduct their assurance reviews of KPO HSE systems and processes.

*With BG Chairman at the ceremony of BG HSE Award for outstanding performance*

## SAFETY PERFORMANCE IN 2013

The KPO's overall safety performance for 2013 and for the previous 5 years is presented in the graphs below. Graph 3 shows KPO's overall Lost Time Injury Frequency (LTIF) and Total Recordable Injury Frequency. 2013 LTIF is 0.29 (0.34 in 2012) and TRIF is 0.46 (0.38 in 2012).

**Graph 3. LTI Frequency and TRI Frequency (KPO & Contractors)**







Unit 3 and KOTS team received a Letter of Gratitude from BG Group for outstanding safety performance

The following method is applied in KPO for calculation of above frequencies.

LTI Frequency = Number of LTIs (Lost Work Day Case + Fatality) x 1,000,000/ man-hours

TRI Frequency = Number of TRIs (Lost Time Injury + Medical Treatment Case + Restricted Work Day Case) x 1,000,000 / man-hours

*Note: First Aid Cases are not included in Occupational Injury calculations.*

Table 3 shows KPO LTIF versus Contractors LTIF.

**Table 3. Lost Time Injury Frequency – KPO vs Contractors**

Performance Indicator	2009	2010	2011	2012	2013
Lost Time Injury Frequency (KPO)	0.21	0.00	0.71	0.42	0.58
Lost Time Injury Frequency (Contractors)	0.10	0.23	0.21	0.30	0.17

Table 4 shows KPO TRIF versus Contractors TRIF.

**Table 4. Total Recordable Injury Frequency – KPO vs Contractors**

Performance Indicator	2009	2010	2011	2012	2013
Total Recordable Injury Frequency (KPO)	0.43	0.11	1.00	0.42	0.58
Total Recordable Injury Frequency (Contractors)	0.69	0.47	0.36	0.36	0.41

All incidents that occur whilst performing work for KPO are required to be reported and investigated. This message is disseminated and emphasised to all KPO and Contractor employees. KPO Contractors are contractually obliged to report all incidents that occur while performing work on the KPO premises or on premises that are or ought to be under the management control of KPO by contractual arrangement.

Every incident that occurs in KPO is thoroughly investigated and aimed at gathering facts, establishing immediate and root causes, identifying any failures in the management system and providing recommendations to correct the failures and to prevent incident reoccurrence. All incident data are registered in the Synergi database and corrective actions are tracked through the system.

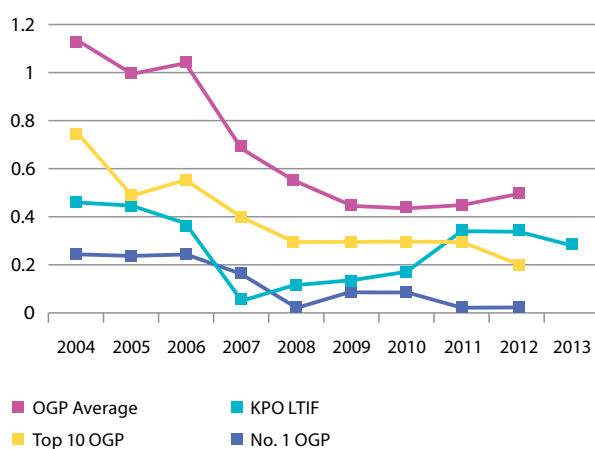
Though KPO experienced 11 Recordable Injuries in 2013 (9 in 2012) it should be noted that none of the lost time

injuries were process related. Four Lost time injuries in KPO were associated with slips, trips and falls. Seven recordable injuries involved contractors' employees, three of them were with Lost Work days (one injury resulted from Road Traffic Incident and two while providing service in office/ canteen). In 2013 the reporting of minor injuries improved – four minor injuries in 2013 (one in 2012) required medical treatment or transfer to light duties.

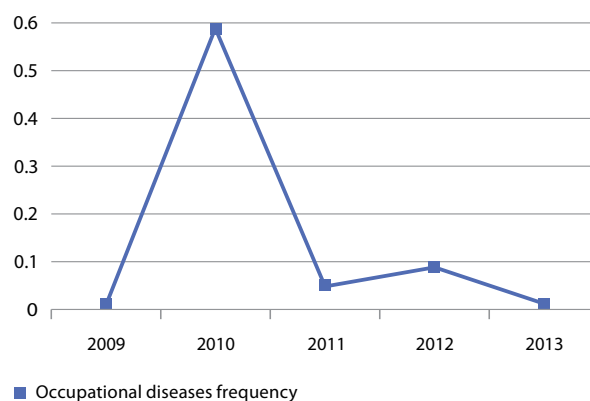
KPO's Key Performance Indicators (KPIs) are annually benchmarked against statistical data, which is reported to the International Association of Oil and Gas Producers (OGP) by many worldwide exploration and production operators. In spite of increased number of Lost Time injuries in KPO within last four years the overall KPO LTIF remains below OGP average indicator.

# HEALTH, SAFETY AND SECURITY

**Graph 4. KPO Performance vs OGP**



**Graph 5. Occupational Diseases Frequency (KPO & Contractors)**

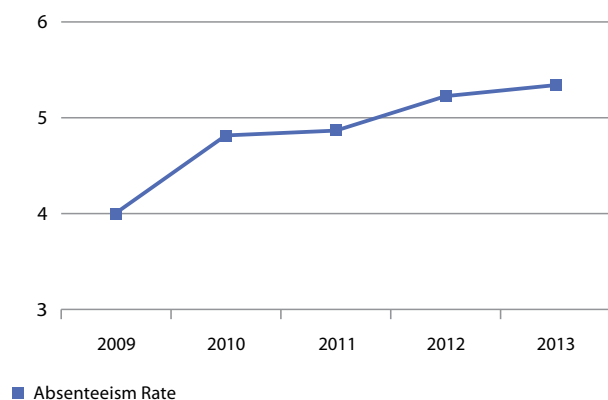


Occupational diseases frequency (per million man-hours worked) = Number of occupational diseases x 1000000 / man-hours worked.

**Table 5. Occupational Diseases Frequency – KPO vs Contractors**

Performance Indicator	2009	2010	2011	2012	2013
Occupational Diseases Frequency (KPO)	0.00	2.46	0.14	0.28	0.00
Occupational Diseases Frequency (Contractors)	0.00	0.00	0.00	0.00	0.00

**Graph 6. Absenteeism Rate (KPO)**



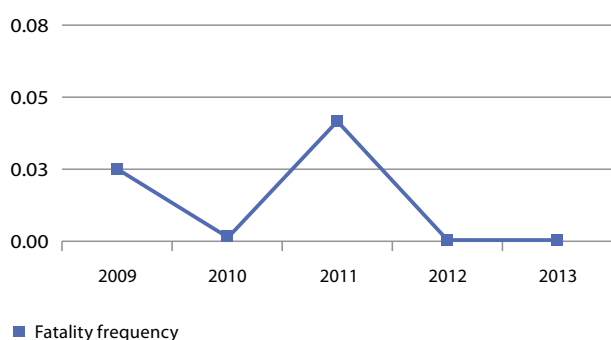
Absenteeism = Actual number of days lost due to absenteeism (sick leave) x 100 / number of employees. No records for other leaves than sick are available.

Increase of Sickness leave within company correspond to general morbidity within Kazakhstan. Leading causes in both cases are disorders related to respiratory system and musculoskeletal system. Increase can be partially explained by growth of employees in number over the last years and by better and wider accessible medical services, with newer diagnostic procedures and therapy available to all employees.



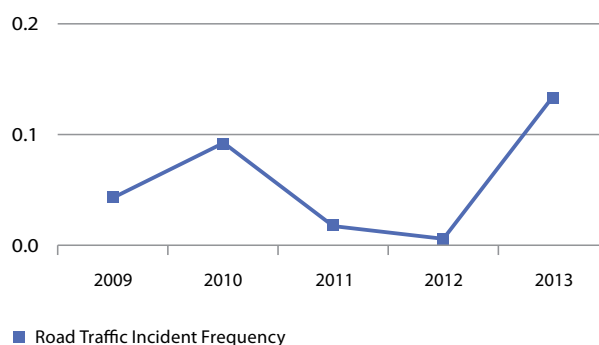
Winners of the BG Group Golden Hard Hat Award

**Graph 7. Fatality Frequency (KPO & Contractors)**



Fatality frequency (per million man-hours worked) =  
 $\text{Number of fatalities} \times 1000000 / \text{man-hours worked}.$

**Graph 8. RTI Frequency (KPO & Contractors)**



Road Traffic Incident Frequency per million kilometres driven increased from 0.00 in 2012 to 0.13 in 2013. The method applied for calculation of the RTI frequency is: RTI Frequency = Number of RTIs (Recordable) x 1,000,000 / km driven.

**Table 6. Fatality Frequency – KPO vs Contractors**

Performance Indicator	2009	2010	2011	2012	2013
Fatality Frequency (KPO)	0.00	0.00	0.14	0.00	0.00
Fatality Frequency (Contractors)	0.03	0.00	0.00	0.00	0.00

**Table 7. Road Traffic Incidents (KPO vs Contractors)**

Performance Indicator	2009	2010	2011	2012	2013
Road Traffic Incident Frequency (KPO)	0.12	0.13	0.00	0.00	0.00
Road Traffic Incident Frequency (Contractors)	0.03	0.09	0.02	0.00	0.14

Health and safety aspects agreed with the KPO Trade Unions and covered in the Collective Agreements include the following:

- Developing and implementing HSE procedures;
- Organisation of training courses for employees to take appropriate measures when HSE issues arise;
- Ensuring the sufficient and adequate means of first aid;
- Organization of the regular medical examination of employees;

- Taking measures to reduce fire and other emergency risks at the operational units and ensuring availability of firefighting and rescue equipment for evacuation in the event of fire or any other emergency;
- Provision of the employees with free protective clothing, special boots, PPE of adequate size and suitable quality;
- Ensuring continuous HSE measures at work places and occupational injury and disease insurance of employees.

# HEALTH, SAFETY AND SECURITY

KPO maintains two-way HSE communication across the company to engage workforce and to promote HSE culture using various tools and ways of engagement. Over half of the KPO workforce - 57%, - participated in formal health and safety meetings with management in 2013.

HSE meetings are regularly held at various levels in the company to discuss HSE topics and concerns and to share lessons learnt from incidents. As part of our contractor management approach and HSE Policy, we engage our contractors in our meetings and discussions related to HSE.

To discuss and address challenges and daily HSE issues at the departmental level, peer HSE meetings are conducted bi-monthly with involvement of HSE personnel from the units and departments.

To engage the contractors in an open communication, we hold HSE Forums with representatives of the main contractors aiming at improving communication and sharing experience and lessons learnt.

At the employee level, KPO have an HSE Helpdesk mailbox allowing them to communicate HSE issues, queries, proposals, complaints, claims and other HSE information. In 2013, KPO HSEQ logged, processed and provided feedback on 202 e-mails sent by KPO employees.

HSE Leadership Tours conducted by KPO senior management play a vital role in demonstrating their commitment to HSE, interacting with workforce in their workplace and encouraging continuous improvement. The number of HSE tours done in 2013 exceeded the target set for the year: 411 tours held against the planned 350.

The centralised system used in KPO for registering, managing and retaining data for incidents, audits, HSE cards, committees, inspections and other HSE related data is Synergi database. Synergi is used by all company's departments and directorates and provides easy access to HSE performance data of KPO and our contractors. Synergi is not just a tool for recording and analysing information, it

*Winner of the BG Group Golden Hard Hat Award, Victor Blinov with colleagues at the Awards ceremony*

is also an integrated system for tracking the completion of assigned corrective actions, for storing all associated documents and reports. All entered data could be easily extracted into different types of statistical reports that are used at all levels of organisation.

## HSE Card

The HSE Card Programme is a single Hazard, Behavioural Based Safety and HSE suggestions reporting system in KPO. It is a core element of proactive health and safety risk management approach applied in KPO. Timely control of hazards and recognition of safe or unsafe behaviours play an essential role in mitigating the occupational risks, improving health, safety and environmental performance. The HSE Card provides an opportunity for personnel to offer suggestions to improve HSE culture within KPO.

The main principle of the HSE Card Programme is that every KPO and contractors' employee or a visitor is responsible for identification, immediate reporting and, where possible, elimination and control of hazards and unsafe behaviours at work place.

The received information is immediately exposed to the worksite environment, which brings a unique value to the scope of health and safety risk awareness and risk reduction programmes maintained by KPO. Another important benefit of the program is engaging every single person in the company and its contractors in the process of identifying and eliminating risks they encounter in their daily job. Employees watching out for the hazards and behaviours at





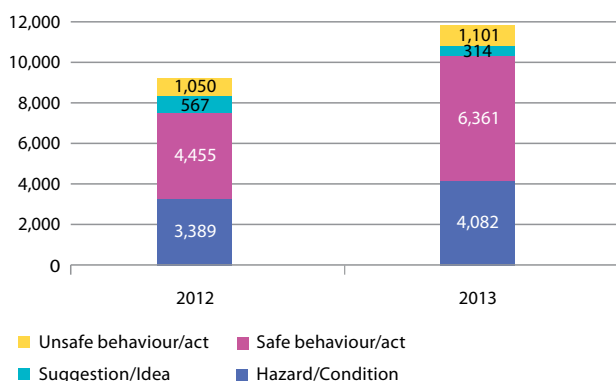


KPO Directors and representatives of the KPO Contractor RauanNalco that won the contest on HSE achievements at the KPO HSE Forum

workplace ultimately embrace a responsibility for their own safety and for the safety of the peers working next to them.

In 2013, 11,858 cards were filled (9,461 in 2012), including 650 (190 in 2012) electronic HSE cards. The annual statistics is presented below:

**Graph 9. HSE Cards by type of observation**



The increased number of HSE cards in comparison with 2012 is mostly due to improved level of programme awareness, which has been achieved through constant training process, reinforced motivation and confidence demonstrated by visible and effective follow-up on action closure and transparent implementation of incentive scheme. In addition, availability of online version of HSE Card has stimulated greater number of overall reported HSE Cards.

In the overall 2013 HSE Card performance, it is worth highlighting the following:

- 5,445 corrective actions have been assigned during 2013, 5,293 of them have been successfully implemented.
- Over 30 contractor companies were engaged and actively participated in the HSE Card Programme having reported some 5,000 observations.
- 674 new observers were trained in 2013, including 358 KPO employees who have successfully passed through the e-learning training.
- 15 HSE Card Programme workshops were held involving main KPO units: KPC, Unit 2, Unit 3, Atyrau Terminal, Eco Centre, Maintenance, Gathering, Warehouse, and other.

To encourage the staff in reporting about hazards and safe or unsafe behaviour, the HSE Award Incentive scheme was applied including:

- Over 300 KPO and contractor personnel were awarded for active participation in the Programme and for significant observations.
- About 40 employees were rewarded with monetary prizes for the best observations at the quarterly award ceremonies.
- The Well Operations HSE Card committee was acknowledged as the Best HSE Card Programme Committee in KPO for 2012 at the 2013 Annual HSE Award Ceremony.
- 6 winners of the HSE Card Awards were recognised by the BG-Group and received a Golden Hard Hat Award for demonstrating extraordinary safety commitment with outstanding behaviours and ideas.

### Emergency Management

KPO ensures the preparedness of the company resources to respond to a potential emergency with short and long-term aftermath as well as its capability to establish and implement effective business contingency planning. A three-level Emergency Response Structure is being followed and each level reflects the respective level of response, responsibility and support depending on emergency escalation.

In order to improve the command and control in emergency response in Karachaganak, a series of specific trainings was delivered to dedicated Incident Management Team (IMT) and Crisis Management Team (CMT) members as well as Crisis Communication training for assigned Corporate Communications responders.

As part of 2013 Level II-III Emergency Response (ER) Training and Exercise Plan, a series of table top scenarios and exercises were conducted:

- integrated emergency exercise jointly with the WKO Department of Emergency Situations that was highly praised and recognised by the Ministry of Emergency Situations of Kazakhstan;



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- integrated exercise that involved all levels of the KPO ER Organisation and CMTs of the Operator companies (exercise TYPHOON);
- integrated exercise between levels I and II (exercise BIZON);
- weekly table top exercises to brainstorm various scenarios with Aksai and Field IMTs.

In order to support the existing training programme, a handbook for duty IMT members that contains all relevant emergency response information was produced and development of the Competency Assessment programme for Duty IMT decision-making personnel was started.

## Life Savers campaign

Working towards achieving KPO's safety goal by promoting hazard awareness and safe working practices, KPO has developed the Life Savers programme. The purpose of the Life Savers is to raise awareness of all personnel working on behalf of KPO in the minimum expectations and requirements associated with eight high risk activities undertaken at KPO.

In 2013 KPO rolled out one remaining topic of Life Saver rejuvenation programme. The Programme was initially introduced in 2011 and rejuvenated throughout 2012.

All departmental managers and Contract Owners have been encouraged to cascade Life Savers roll-out presentations and training programmes to their contractors and to display the posters.

The Life Saver requirements have been incorporated into site level check lists to monitor the compliance on a daily basis.

## 2013 HSE Plan

The KPO HSE Plan 2013 was aimed to pursue the annual targets and initiatives to support the long term objectives set in KPO 4-Year Strategic HSE Plan and to drive continuous HSE improvement across KPO. The overall objective was to improve HSE management, further risks control and prevention of harm to people and the environment by implementing a number of SMART actions during 2013 that were over and above KPO's day to day business activities to deliver tangible benefits and improvements.

The HSE plans are built on the principle of the success and lessons learnt of the previous annual HSE plans and a structure was developed to recognise the different needs, priorities and diverse range of activities across the directorates whilst working towards a common purpose of HSE improvement.

The KPO HSE Plan 2013 comprised of an overarching HSEQ Controllership work plan with actions for the continuous improvement of the overall HSE management system throughout the company which was then supported by individual work plans for each Directorate. This approach enabled focused effort and ensured effective implementation of the HSE improvements throughout each directorate with additional directorate related priorities included. Corporate departments with specific HSE improvement requirements have also been included.

The HSE 2013 plan was elaborated upon the KPO HSE Plan 2012, and comprised of six elements:

- 1 – Compliance with HSE Management system requirements
- 2 – HSE Leadership and Supervision
- 3 – Contractor HSE Management
- 4 – Risk Management
- 5 – PSIM and Industrial Safety
- 6 – Environmental Performance

In 2013 KPO completed 87% of the planned activities with some of the activities carried forward to the 2014 HSE Plan due to the budget limitation. Core activities of the 2013 HSE Plan are summarised below.

## 1. Compliance with HSE Management system requirements

This element is targeted at maintenance and continuous improvement of the sustainable KPO HSE Management system.

Following the Field-wide H<sub>2</sub>S emergency response study conducted in 2012, KPO is committed to establish a coherent field-wide emergency response and H<sub>2</sub>S controls strategy for all areas within the KOGCF but outside of the KPO operational facilities. The following activities were carried out:



At the weekly HSE meeting

- Works on implementation of electronic POB control system (the system of personnel on board calculation) at Field Security gates as part of Security Management System upgrade - this system will allow monitoring and tracking the number of all employees and contractors within the field boundary;
- Identification of non-critical personnel to be relocated to other facilities outside of the field in order to minimise personnel risk associated with H<sub>2</sub>S impacts. KPO adopts a 'minimum manning' philosophy within the KOCGF boundary;
- The number of Tetra radios was increased to enhance its usage within departments;
- Mobile phone service-package ("SMS-click") was adopted to enable the communication of emergency information by Emergency Communications Centre Operator to the group of contacts within ER and Transport services in case of emergencies which may require the field-wide response;
- The feasibility study on installation of alternative H<sub>2</sub>S detectors, strobe lights and sirens at Field well sites performed;
- To improve the ER evacuation times and routes the work on establishing helicopter service provider was commenced.

Two Contractor HSE Forums were conducted aimed at improving contractors' awareness and compliance with KPO HSE procedures, activities and expectations on HSE Leadership, Line Supervisors competence, Waste Management. KPO procedures applicable to contractors were communicated and discussed. Those forums were supported by smaller contractor workshops organised by individual Directorates.

Project on Enhancing of HSE Procedures awareness among KPO Level 0-4 management staff commenced. HSE documentation management system process was reviewed; RACIE approach (approach on responsibility distribution) was adopted assuring documents adequacy prior issue.

## 2. HSE Leadership and Supervision

KPO continued implementation of the Line Supervisor HSE Competency Enhancement programme. In 2013

KPO conducted STEP (Safety Training and Enhancement Programme) for line supervisors who were assessed in 2012 and found to have gaps in HSE competencies. KPO strongly believes that effective supervision and accident prevention relies on the competence of front-line supervisors and the initial step in competency enhancement was achieved by STEP training, which covered the first priority areas such as HSE Risk Management, Safe Systems of Work, Incident and Near Miss Investigation and Reporting, HSE Inspections and Audits, Life Savers and other elements.

Defensive driving courses programme was updated taking into account the results of the analysis performed and trainings conducted.

## 3. Contractor HSE Management

In 2013 Contractor HSE Performance Management Strategy comprising of an HSE Performance Scorecard was finalised and will be implemented in 2014 for all high HSE Risk contractors in order to monitor and act upon positive and negative changes in the Contractors HSE performance thus decreasing the number of incidents and improving overall performance of contracts.

## 4. Risk management

In 2013 KPO HSE Risk Management framework was developed and issued with the objective to roll out in 2014. The framework document establishes the consistency in risk acceptability criteria and brings forward the unified approach to selection of the risk assessment tools as well as consistency in applying risk acceptability criteria.

## 5. PSIM and Industrial Safety

Process Safety and Integrity Management programme (PSIM) was incorporated into KPO HSE Plan to assure the integrity and safe operation of our assets. As part of this process works on implementation of the minimum requirements for each of the Process Safety and Integrity Management (PSIM) elements as described in the KPO PSIM Standard were carried out. The Major Hazard Awareness workshop in Spadeadam test site attended by KPO senior management in UK in 2012 was followed by the "CryWolf"

# HEALTH, SAFETY AND SECURITY

major hazard awareness workshops held locally in Aksai in 2013, which covered critical level 2 Managers. Further work on major hazard awareness will continue in 2014.

## 6. Environmental performance

As follow-on from the 2012 HSE Plan KPO conducted environmental awareness training seminars for key personnel at production departments in order to increase Environmental awareness and Environmental culture on the Field.

### KPO 2014 HSE Plan

The annual HSE Plan for 2014 has been developed based on the same principles and objectives as previous plans. Development of the plan was supported by the detailed review of learnings from the successes and failures of 2013 HSE Plan, findings of internal and external audits, HSE programmes and initiatives implemented in 2013. The plan includes actions identified in the Strategic 4 year HSE Plan.

As in 2013, the KPO HSE Plan for 2014 sets actions that are over and above the day to day activities, identifying clearly which Directorates are required to be involved, individual actions as well as their input to the company wide projects. Due to long term nature of the initiatives being implemented in KPO, the Plan structure has not changed significantly, thus including the following main elements:

- Compliance with HSE Management System Requirements
- HSE Leadership & Supervision
- Contractor HSE Management
- Process Safety and Risk Management
- Environmental Performance
- Health Performance

The section on Health Performance Improvement was included in the 2014 Plan in order to increase the profile of health improvement initiatives being implemented in KPO. The Process Safety and Integrity Management element was combined with the Risk Management section as a reflection of combined efforts in these two areas.

Graph 10. KPO HSE Plan for 2014





KPO middle managers at the Cry Wolf training seminar on Major Hazard Awareness

As in 2013, the KPO HSE Plan implementation will be monitored and reported on a monthly basis to the KPO senior management and Operators in order to maintain the focus on key company HSE objectives.

### OCCUPATIONAL HEALTH

KPO recognizes that the oil and gas industry presents some inherent health hazards in its operations and products. The company has made a commitment to achieve excellence in managing these hazards, striving to go beyond regulatory obligations. The Health Management System established in KPO in accordance with OHSAS 18001 has the following objectives:

- Ensuring patient safety;
- Eliminating work-related illness;
- Managing medical care;
- Maintaining a healthy workforce;
- Optimizing business performance and reputation;
- Meeting legal requirements;
- Ensuring cost-effectiveness.

Health performance indicators are a necessary part of effective health management and the promotion of improvements in health performance. There may be a considerable time lapse between exposure to health hazards and the development of health effects. It is clear that monitoring systems are needed which provide early feedback on performance before ill health or an incident occurs. Therefore, the use of proactive systems and leading indicators is of particular importance.

### Health risk assessment and planning

Health Risk Assessment (HRA) forms the foundation for the other elements of the Occupational Health Management System. HRA of all units and job titles is part of the 4-year Strategic HSE Plan. In 2013, the HRA teams have conducted assessments at Unit 2, Unit 3 and KSS offices in Aksai. The results of the HRA have been communicated to line management and staff and action plans developed to address findings.

### Industrial hygiene and control of workplace exposures

A fully licensed and well-equipped sanitary laboratory carries out statutory workplace monitoring. The measurement results are used to identify non-compliances with industrial hygiene norms and to implement corrective actions. As KPO is committed to setting a high standard of workplace exposure control, continuous improvement of the sanitary laboratory's capabilities has been a priority for the Health Department.

### Medical emergency management

The KPO Medical emergency response plan provides a structured approach to dealing with accidents and incidents. A committed team of highly qualified and experienced doctors, feldshers and drivers with a fleet of state-of-the-art ambulances operate 24/7 from five fully equipped clinics in the Field and Aksai. Heavy-duty ambulances are on standby to respond to multiple casualty accidents. The opening of a new clinic in the Pilot Camp has been made in 2013. The preparedness to emergencies is maintained through regular drills and exercises.

### Management of ill-health in the workplace

*Managing Health for field operations in oil and gas activities publication* states that "a system should be established which provides access to primary, secondary and emergency medical facilities, as well as to occupational health expertise where appropriate, and which is underpinned by a systematic approach to maintaining and improving the quality of care within the health system".

The KPO medical emergency procedures ensure that evidence-based treatment by skilled and competent staff is provided in a timely fashion at the accident scene, and that patients are transported to secondary medical facilities in Aksai, Uralsk and other cities. Specialist treatment and medical evacuation and repatriation are also available for company employees.

A set-up of an occupational health-care facility (Occupational Medicine Unit) has been underway in the Medical Centre in Block 7 of the Czech Camp.



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It will be equipped to provide clinical health surveillance of employees, return to work assessments, support for human resources employment/re-deployment policies and procedures.

To date, 22 cases of occupational diseases had been registered in the company. 20 of them were related to Noise-Induced Hearing Loss (NIHL). No new cases were identified in 2013 (see Graph 5 on p. 36). KPO developed and implemented the Hearing Conservation Program with the purpose to control the noise as the hazardous factor. Prophylactic treatment has been provided for employees with occupational diseases.

## **Fitness for task assessment and health surveillance**

The purpose of a fitness for task assessment is to ensure proper placement of prospective employees in job positions that will match their capabilities without risk to themselves and co-workers. This process is influenced by the local legislation and KPO has managed to align its Fitness to Work policies with Kazakh regulations while recognizing the need to adapt the best practice principles, particularly health surveillance, into its activities. A part from mandatory periodic fitness to work check-ups of its Field-based personnel, KPO has arranged for office staff to undergo medical screening to evaluate their general health status.

## **Health reporting and record management**

Good health record keeping and reporting are essential because of the long latent period for the development of occupational illness, which may result in many cases being reported a considerable period after the onset of exposure.

The KPO document control, incident management and medical care procedures ensure that health related matters are handled in a legally sound manner, records are maintained and internal and external reporting is complete and thorough. KPO treats medical confidentiality as a fundamental principle of patient care.

## **Public health interface and promotion of good health**

Corporate social responsibility is an important requirement of sustainable partnerships with stakeholders, based on

consultation and respect for host culture, and related to preventive health care. KPO takes active position in promoting healthy lifestyle, increasing awareness of general and occupational health problems, educating local communities in the importance of preventive measures, such as vaccination, medical screening, physical exercise, substance abuse etc. The younger generation is at particular risk, and Health Department staff has been engaged in making a series of presentations on various health topics in Aksai schools. This activity will be continued in 2014.

## **Control of food, water and sanitation issues**

A food safety and potable water quality monitoring programs have been implemented in KPO for a number of years. Food poisoning outbreaks and water-borne diseases present substantial health, operational and reputational risks. That is especially critical during plant shutdowns when there is a significant increase in the number of workers in the Field. The Occupational Health and Hygiene team has played a major role in helping to ensure an adequate catering service provision and prevention of food or water related health issues.

## **SECURITY**

The past year has seen a renewed sense of purpose between Security Department, local and regional law enforcement organisations in relation to extremist activity within Kazakhstan. Working relationships between KPO and Kazakhstan law enforcement authorities are crucial if we are to be forewarned and prepared. It is critical all employees remain alert and vigilant to anything suspicious and report such things without delay.

Although there have been no illegal taps last year we cannot be complacent. Rigorous and inquisitive patrolling and continued interaction with communities and villages along the route of the Export Pipeline are aimed at mitigating the threat of illegal taps.

Thus, in 2013, with purpose of getting acquainted with the KPO activities in oil-condensate extraction and transportation we held the following activities:



*At the KPO medical centre at the Field*

May 21, 2013 - Meeting with the administration and settlements residents living along the export pipeline from KPC to Uralsk. During the trip the settlements of Terektinsky District of the West Kazakhstan oblast were visited.

May 22 – 24, 2013 - Meetings were held with the heads of akimats of districts and rural districts, the administration and the school staff, heads of district departments of Emergency and residents of settlements located along the export pipeline section Uralsk - Atameken WKO.

October 29 – 31, 2013 – Visits to and meeting with the administration and the residents of Atyrau oblast settlements located along the export pipeline. During the trip, the settlements of Makhambet and Inder districts of Atyrau region were visited.

The reality of a Security Management System (SMS) for KPO came a step nearer at the end of April when it was announced a budget had been allocated. As an integrated management

tool SMS will greatly increase efficiency in response to safety and environmental risks. Preparations are also in hand to install new security fencing around the major Units in the Field to replace the current ageing fencing. Both SMS and this new fencing will significantly assist in mitigating the threat from terrorism, vandalism and theft in the Field.

Security Department is assisting Corporate HSE in the development of an electronic system to assist in resolving personnel on board (POB) and mustering of personnel in case of emergencies in the Field.

The development by Security Department of a new, clearer and 'spot marked' map of the Karachaganak Field has been completed. This map permits emergency services to be deployed quicker and more accurately to the scene of any incident and allows for a greater degree in accuracy in reporting what is happening where, what is required where, and where to go.



*KPO Medical department promotes healthy life style among school children in Aksai*

# CARING FOR THE ENVIRONMENT

Environmental protection in the technically complex Karachaganak field is a challenge. To support overall efforts aimed at solving climate change problems we apply world-class techniques and innovative technologies to protect the environment in the region where we operate.

## **Implementation of the Environmental Protective Measures Plan for 2013**

Following the principles of sustainable development is a priority for KPO while conducting its operational activities. The core commitments of the Company's HSE policy are: to minimize negative impact on the environment, to reduce environmental pollution level, and to ensure protection of environment and environmental safety. The Company applies conscious effort to adhere to the Environmental Protection principles, to reduce greenhouse gas emissions and to save natural resources by introducing best available technologies. To achieve this objective, KPO develops the Environmental Protective Measures Plan (EPMP) in accordance with chapter 10 of the Republic of Kazakhstan's Environmental Code.

The development process of KPO EPMP for 2011-2013 was regulated by the procedure of "Preparation of KPO Environmental Protective Measures Plan for 2011-2013". The company set up a special Steering Committee consisting of representatives from various departments responsible for developing measures, scheduling and allocating costs for implementation of the measures, as well as further control of their delivery. Corporate Environment coordinated the final development of EPMP. Progress of EPMP implementation is monitored on a monthly basis.

Actual funds spent for implementing environmental activities in 2013 according to EPMP amounted to about KZT 5.5 billion or USD 35.8 million.

As the result of implementation of the EPMP in 2013:

- 28 measures were completed;
- Three measures are at the stage of completion;
- One measure will be implemented in 2014 and another one after its completion.

The works on implementation of upgrade of treatment facilities for domestic, industrial storm water and oily wastewater are in completion stage (full completion of works is expected in the 3<sup>rd</sup> quarter of 2014) as well as works on implementation of the design decisions on treatment facilities upgrade for industrial wastewater injected into subsurface formations within KOGCF which detailed design has been completed and procurement of equipment is in process (expected completion date is September 2014). The works on implementation of installation and startup of equipment for solid municipal waste (SMW) segregation ensuring separation of glass, plastics, paper, wood and metal waste are also at the stage of completion: construction of utilities and office building, assembling of automatic fire extinguishing and fire alarm systems, utility and potable and fire process water supply is being completed.

The EPMP measure regarding waste treatment of cells 3 and 4 of solid waste and spent drilling fluids disposal site will be implemented in 2014 and upon its completion, the Reclamation of solid waste and spent drilling fluids disposal site (cells 2, 3 and 4) measure will be implemented.

In the course of the implementation of the above environmental protective measures, KPO has faced some difficulties both of internal and external nature, resulting in the delay of projects implementation.

Table 8 shows the detailed breakdown of costs by the EPMP sections.

Implementation of environmental protective measures in 2013 has enabled to achieve the following results:

- Reduction of soot emissions to the atmosphere by 77.7 tonnes as a result of using of Supergreen Burner when flaring hydrocarbons at wells. The unit soot emission reduction per 1 tonne of flared hydrocarbons is 0.002 tonne;
- Reduction of emissions to the atmosphere by 2,210 tonnes as a result of partial oil recovery during well cleanup;
- Water consumption from natural reservoirs for production needs was reduced down to 64,343 m<sup>3</sup> per year due to reuse of treated wastewater;



**Table 8. Breakdown of costs for EPMP implementation**

Group of environmental measures	Actual costs in 2013, million KZT
Air Protection	1,305
Water Resources Conservation and Rational use	2,062
Land Conservation	246
Subsurface Conservation and Rational use	67.5
Flora and Fauna Conservation	167
Production and Consumption Waste Management	1,307
Implementation of management systems and best available safe technologies	24.6
Environmental design, survey and research activities	288
Radiation safety, Chemical safety and Biosafety	2.7
Environmental awareness and publicity	27.9
<b>Total</b>	<b>5,498</b>

- Over 60 ha of land disturbed as a result of well operations and construction works, have been remediated and restored;
- Mechanized planting of trees across the area of 59.21 ha was completed;

- About 7.17 thousand tonnes of wastes accumulated at solid waste and spent drilling fluids disposal site was treated in Eco Centre units.

The company pays great attention to professional training of specialists in the field of environmental protection. In 2013 KZT 17.1 million (USD 111.3 thousand) were spent on the training seminars and courses in ecology for the staff. Over 150 people were trained.

In 2013, the Environmental Protective Measures Plan was developed for 2014. Public hearings on the EPMP for 2014 were held in June 2013 in Aksai and Bolshoy Chagan Kushumsky rural district of Zelenovsky district.

#### EMISSIONS TO AIR

Undertaking necessary operations associated with Karachaganak field development and operation of existing infrastructure facilities inevitably affects the environment including ambient air.

In 2013, as a result of KPO operations 11.3 tonnes of pollutants were released to the air, main of which is Sulphur dioxide SO<sub>2</sub> (50%). Other main emissions are nitrogen oxides NO<sub>x</sub> (18%), carbon oxide CO (14%) and volatile organic compounds — methane hydrocarbons CnHm (15%).

The bulk of SO<sub>2</sub> is produced from associated gas flaring and waste air combustion in incinerators, NO<sub>x</sub> and CO are generated from fuel combustion for operation of gas turbines, boilers, process furnaces and compressors.

KPO undertakes air emissions management on the basis of limits specified in the Environmental Emissions Permit. For the last few years KPO has operated without exceeding the set limits. Table 9 shows KPO authorized and actual emissions figures for 2011 - 2013. The total volume of air emissions was increased by 11% in comparison with the previous year for the following main reasons:

1. Shutdown of process units for scheduled preventive maintenance (SPM) in 2013, associated with emptying and purging of process units;
2. Increased scope of well operations, including well clean-up after multistage hydraulic fracturing (MSHF).



# CARING FOR THE ENVIRONMENT

**Table 9. Permitted and actual volumes of pollutants' emissions**

Pollutant emission volume, in tonnes:	2011	2012	2013
Permitted:	16,186	15,290	15,321
Actual, including:	8,512	10,215	11,320
Nitrogen oxides	1,803	1,956	2,068
Sulphur dioxide	3,635	4,957	5,703
Carbon oxide	1,199	1,464	1,637
VOCs (volatile organic compounds)	1,744	1,645	1,700
Hydrogen sulphide	27	29	29
Solid particles	50	88	110
Others	52.8	76.8	73

*Note: Emissions figures are provided in accordance with statistical air reports 2-TP.*

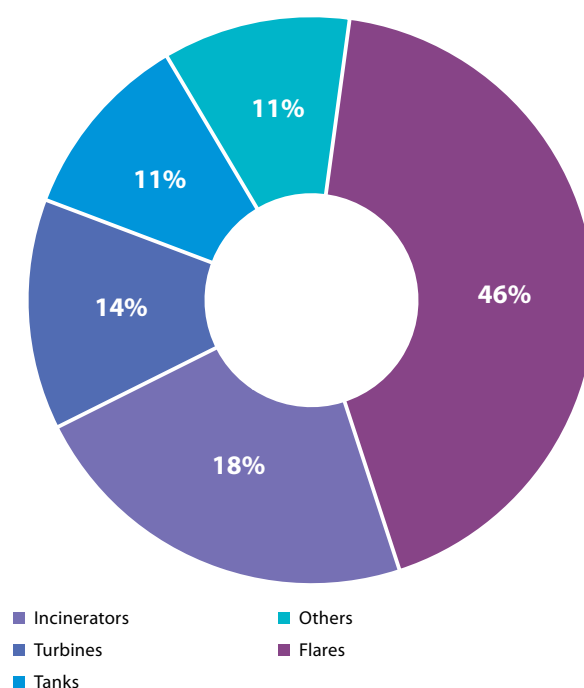
Emissions of pollutants at KPO are determined by calculation method based on initial data of fuel consumption and composition, as well as equipment operation time. Application of the calculation method was adopted at KPO due to the absence of certified devices for continuous monitoring of emission sources in RK.

Flow rates of oil, raw and fuel gas subject to flaring are determined by the method of constant measurements and fuel balance, diesel fuel flow rate is determined by accounting method, and equipment operation time – based on operators' daily reports. Gas and oil composition is determined by internal certified laboratory.

Calculations of each constituent were made based on the data on each separate substance and each type of emission source with application of procedures recommended in the RoK.

Applicability guidance manuals not included in the registry of existing regulatory guidance materials in RoK, has been approved specifically by the Ministry of Environmental Protection (Letter of MEP No. 06-03-01-6/1115-1 dated May 13, 2010).

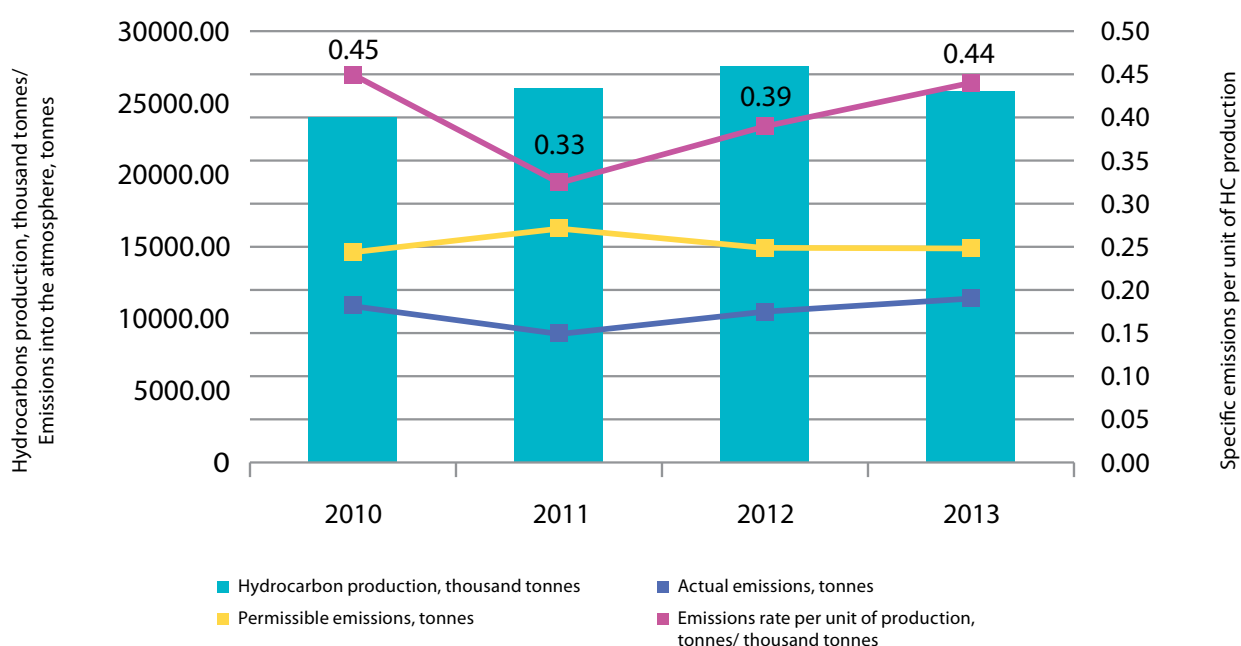
**Graph 11. Distribution of pollutant emissions at KPO for 2013 by main air pollution sources**





KPO Employees - winners of the KPO Environmental Contest on personal input into environmental protection

**Graph 12. Volumes of hydrocarbon production and air pollutant emissions, 2010-2013**



Specific emissions per unit of production in 2013 amounted to 0.44 tonnes per thousand tonnes of hydrocarbons production.

Increase in specific emissions in 2013 in comparison with 2012 is justified by SPM, as well as by a significant growth in the volume of associated gas and liquid hydrocarbons flaring (22% and 66%, respectively) at wells, caused mainly by active work associated with MSHF.

#### **GAS FLARING**

Emissions from hydrocarbon mixture flaring at flare stacks of the process facilities and wells are the main contributors to the total volume of KPO emissions (46%). In 2013, volume of gas flaring was equal to 0.16% out of the total volume of gas produced by KPO or 0.94 tonnes per thousand tonnes of produced crude oil (according to OGP report for 2012,

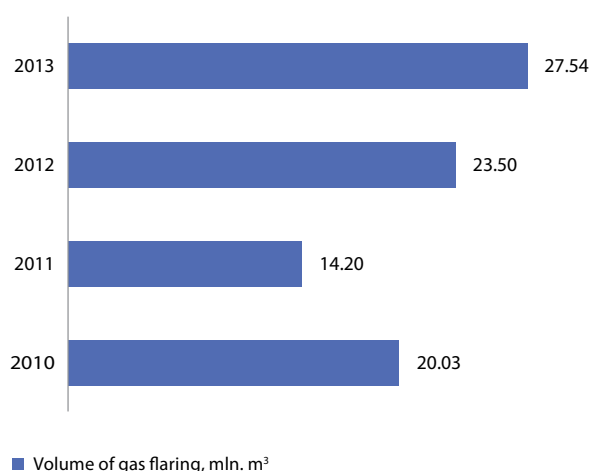
the similar world-wide average indicator is 13.9 tonnes per thousand tonnes, European average – 3.46 tonnes per thousand tonnes). This confirms that KPO achieved very good performance level on this indicator among world and European oil and gas production enterprises.

Nevertheless, KPO continues to look for and introduce further emission reduction technologies, especially in the areas of well testing and well clean-up.

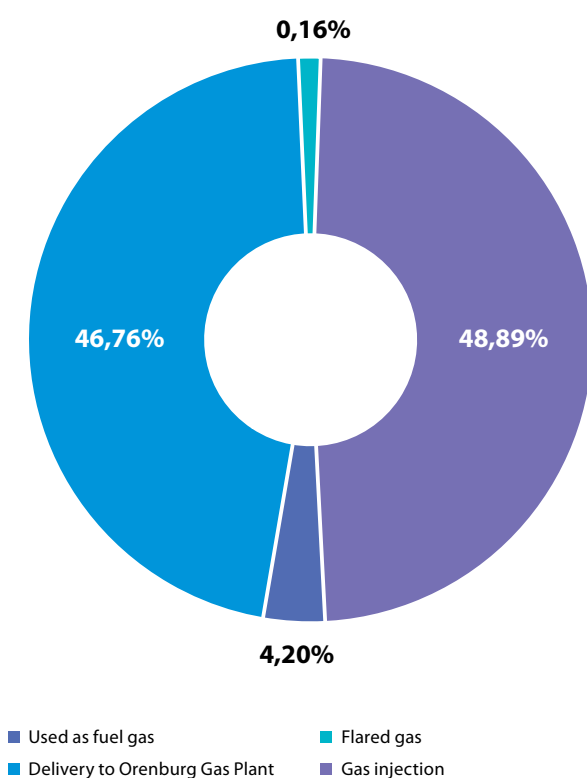
An increase in actual and specific gas flaring volumes by 17% and 21%, respectively, compared with 2012, is due to the increased well operations, including clean-up of three wells after multistage hydraulic fracturing. The difference between the increase in actual and specific gas flaring volumes is explained by the reduction in the volumes of production in 2013 due to the shutdown of KOGCF facilities for SPM.

# CARING FOR THE ENVIRONMENT

**Graph 13. Volumes of associated and natural gas flaring**



**Graph 14. Gas utilization and flaring in 2013**



In 2013, the Company, along with the use of new equipment for partial oil recovery during well clean-up which was introduced in the 2<sup>nd</sup> quarter of 2012, also used Megaflow equipment for purpose of well clean-up. As a result of adopting these initiatives, the volume of liquid hydrocarbons flaring decreased by almost 40,000 tonnes of oil, which amounts to 64% of the volume produced during clean-up with planned reduction of 10,000 tonnes per year. Thanks to Megaflow system, the volume of gas flaring whilst well clean-up was 20 mln m<sup>3</sup> with authorized volume of 40.6 mln m<sup>3</sup>.

## GAS UTILIZATION IN 2013

In 2013, KPO achieved the word-class gas utilization rate of 99.84% (99.87% in 2012), taking into consideration the performance target approved by Regulatory Authorities within the Associated Gas Utilization Programme is 99.47%.

Measures on air quality monitoring are described in the chapter "In dialogue with the local communities".

## DIRECT GREENHOUSE GAS EMISSIONS

Issues related to the management of greenhouse gas (GHG) emissions are a priority task for KPO, since the process of hydrocarbon production and processing is accompanied by greenhouse gas emissions, which are subject to registration according to the provisions of the Kyoto Protocol and the Environmental Code of Kazakhstan.

As of 2013, significant amendments have been introduced to the environmental legislation of Kazakhstan on greenhouse gas regulation. Reporting requirements for KPO for 2013 were primarily aimed at the fulfillment of new legislative requirements regarding GHG quota allocation, GHG emissions monitoring, development of regulatory technical documentation, GHG emission verification. As the result of this work, KPO became one of the first enterprises in Kazakhstan which had obtained the certificate for GHG emissions for 2013.

In 2013, CO<sub>2</sub> emission quota for KPO amounted to 1,755,954 tonnes.

Every year KPO monitors GHG emissions with direct GHG effect as to CO<sub>2</sub> - carbon dioxide and CH<sub>4</sub> - methane, being the objects of state regulation according to the RoK Government Resolution as of May 22, 2012 No. 655. In 2013, the GHG emission quota in Kazakhstan was provided only for carbon dioxide (CO<sub>2</sub>).



KPO Employees received the KazEnergy Environmental Safety Prize

GHG emission monitoring during the reporting year of 2013 was conducted in full accordance with the approved monitoring plan for 2013, wherein all the sources of greenhouse gas emissions, belonging to KPO, were taken into account.

Emission assessment was carried out by calculation method on the basis of data on the enterprise activities and by using methodological guidelines No. 280 dated 05.11.2010 approved by the RoK Environmental authority.

When calculating GHG emissions resulting from fuel combustion (fuel gas, sour gas, and liquid hydrocarbons) at the emission sources, fuel consumption data of the enterprise were used that were obtained using calculation - balance method using measurement instruments.

*\* GHG emissions are not measured but calculated on the basis of data on production outcomes and fuel consumption, using emissions factors or conversion coefficients based on data of fuel component composition.*

To calculate CO<sub>2</sub> emission factor and other auxiliary parameters from fuel combustion (fuel gas, sour gas, liquid hydrocarbons) KPO used quarterly/annual averages of fuel compositions characteristic of each facility and fuel type calculated by chemical laboratory based on weekly sampling.

When calculating GHG emissions of methane (CH<sub>4</sub>), default factors listed in the above methodological guidelines were used.

Based on the results of monitoring in 2013 total GHG emissions amounted to 1,758,070 tonnes of CO<sub>2</sub>-equivalent, of which CO<sub>2</sub> share equals to 1,615,098 tonnes of CO<sub>2</sub>-equivalent (92%) and CH<sub>4</sub> - 142,972 tonnes of CO<sub>2</sub>-equivalent (8%). Thus, in 2013, GHG emissions of KPO have not exceeded the quota.

To convert GHG emissions into carbon dioxide equivalent (CO<sub>2</sub>-equivalent) global warming potentials (GWP) of the IPCC adopted in 1995, were used, based on the climatic impact of GHGs for a 100-year period. GWP for methane is 21; GWP of carbon dioxide is equal to 1.

At the end of the year, the monitoring results for the reporting period are confirmed by an independent accredited organization in view of compliance with the validity of data obtained on the enterprise activities and proper use of calculation methodology for greenhouse gas emissions.

The main technological process in the KOGCF leading to generation of GHG is fuel combustion at stationary sources (80.4%). GHG emissions from fuel combustion at flares and incinerators and fugitive emissions constitute 11.5% and 8.1% respectively.

**Table 10. Dynamics of GHG emissions generated in the course of KPO production activities**

General volume of greenhouse gases (in tonnes CO <sub>2</sub> – equivalent)					
From fuel combustion at flares and incinerators	From fuel combustion at stationary sources	Fugitive emissions	Total volume of GHG emissions in 2013	Total volume of GHG emissions in 2012	Total volume of GHG emissions in 2011
196,387	1,421,330	140,353	1,758,070	1,769,768	2,263,554 (1,670,764)

Notes:

1. Data on GHG emission generation for 2012 and 2013 are verified by an independent accredited organization.
2. The figures in the brackets show the values calculated using the methodology adopted since 2012 to enable them to be comparable to the figures for 2012 - 2013.

According to the shown dynamics of GHG emission generation, a slight decrease in GHG emissions in 2013 in comparison with 2012 is seen due to scheduled preventive maintenance shutdown in 2013.



# CARING FOR THE ENVIRONMENT

## INDIRECT GREENHOUSE GAS EMISSIONS

Indirect GHG emissions at KOGCF generated as a result of power consumption from the regional WKO power system accounts for an insignificant part (0.004%) of the total KPO GHG emissions, since the Company owns the gas turbine power station, which provides electrical power for the whole complex of production facilities in the field and nearby communities.

These emissions are not subject to accounting and reporting as part of internal GHG emission quota system of the Republic of Kazakhstan, information on them is provided in the reports to our Parent Companies only. During 2013 the volume of indirect GHG emissions at KPO amounted to 177 tonnes of CO<sub>2</sub>-equivalent.

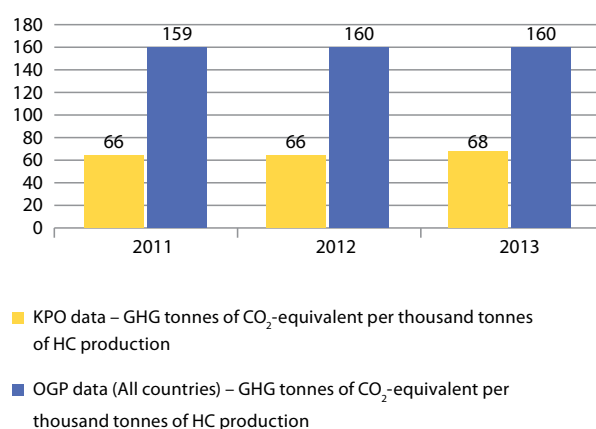
Calculation of indirect emissions is performed by means of multiplying the actual volume of purchased electricity (MWh) by the international emission factor (0.684 t/ MWh) for Kazakhstan.

## SPECIFIC GREENHOUSE GAS EMISSIONS

Specific GHG emissions per unit of HC production in 2013 amounted to 68 tonnes per thousand tonnes of hydrocarbon production. Growth of specific GHG emissions compared to the previous period is associated with the following reasons:

- an increase in the volumes of natural and associated gas combustion at vertical flare stacks due to the shutdown of operational facilities; an increase in the volume of well operations in connection with preparation of the KOGCF development projects;
- an increase in the volume of power supply to an external grid at the request of "BatysEnergoresursy" LLP to supply to WKO consumers resulting in the need for additional fuel combustion at KPO power plant.

**Graph 15. Dynamics of specific GHG emissions per unit of HC production**



Despite the reasonable increase, specific GHG emissions at KPO per unit of hydrocarbons production are at the European data level and 45-56% less than average international indicators in oil producing industry.



**Table 11. Comparative analysis on specific GHG emissions per unit of hydrocarbons production**

Environmental condition indicator categories	KPO data			OGP data (Europe)	OGP data (general)
	2011	2012	2013	2012	2012
$CO_2+CH_4$ ( $CO_2e$ )					
Tonnes per thousand tonnes of HC production	66	66	68	94	160
$CO_2$					
Tonnes per thousand tonnes of HC production	59	59	62	83	132

#### GHG EMISSION REDUCTION

From 2008 to 2012 the Company voluntarily has been reducing GHG emissions on the basis of the GHG Management Strategy.

Due to implementation of the measures in the framework of this Strategy, cumulative decrease of GHG emissions of more than 450 thousand tonnes during 2007-2012 was achieved.

Since 2013, in connection with the entry into force of the legislation that provides for the reduction of GHG emissions, KPO operates in this sphere on the basis of the Programme on GHG emission reduction for 2014-2015, verified by an independent organization.

The Programme for 2013 set the target to reduce GHG emissions ( $CO_2$ ) by 73,345 tonnes through implementation of a number of projects.

**Table 12. GHG emissions reduction opportunities**

№	Opportunity	Emissions reduction, tonne / year	
		Plan	Actual
1.	Reequip compressor lines B and C at Unit 2	17,378	19,572
2.	Repair valves leaking to KPC flare headers	10,329	23,727
3.	Commission of a well clean-up liquids recovery system	29,600	117,075
4.	Adjust steam flow meter at Train 4	15,538	7,344
5.	Operate one pump instead of two on the separator of Train 4 condensate stabilization column	356	247
6.	Wash air coolers on Unit 2 reinjection lines during summer	144	144
	<b>Total:</b>	<b>73,345</b>	<b>168,109</b>

In fact, the Company exceeded the set goal for the 12 months of the reporting year by 2 times through active implementation of opportunities 2 and 3.

# CARING FOR THE ENVIRONMENT

## ENERGY CONSUMPTION

### Energy Saving Programme

In 2012 the RoK Law "On energy saving and energy efficiency", aimed at ensuring energy saving, improving production energy efficiency and efficient use of energy resources, was issued.

KPO was included in the State Energy Register, as the economic entity, which consumes energy resources in the volume of 1500 or more tonnes of carbon equivalent per year.

In accordance with the RoK legislation requirements in the sphere of energy saving, KPO invited representatives of West-Kazakhstan branch of JSC "National expertise and certification Centre" and JSC "Kazakhenergoekspertiza" to conduct expert assessment. Invited auditors met with representatives of KPO departments, consuming energy; gathered information on the consumption and the state of resource accounting at KPO to analyze it and issue relevant conclusion. The induction training on the energy management was arranged for a specific number of personnel carrying over control of energy consumption and measurement. In the future, it is planned that such training sessions will be arranged for all Company employees to familiarize them and subsequently allow to implement the proposals on energy saving.

The expert conclusion will allow to identify zones for the energy saving and develop further steps to implement the system of energy management in the company. The final results of the expert assessment have not been received at the time of this Report preparation.

### Electric power consumption

In 2013, similarly to 2012, there had been an increase in electric power consumption at the Karachaganak Field facilities. The growing dynamics is explained by the putting additional capacities, such as, for example, a new Boiler House at the Eco Centre, into operation.

Moreover, an increase in electric power consumption at KPC was due to putting into operation of additional powerful compressor to improve the process stability and to provide the control flexibility.

**Table 13. Primary energy resources consumption**

Primary energy resources consumption, 10 <sup>15</sup> J	2011	2012	2013
Non-renewable sources, primarily natural gas	6.24	6.37	6.78

The table 14 shows the dynamics of purchase of energy by the field operational units over the past three years.

KATS decreased the level of energy purchased since KPO had introduced amendments to the contract with the service providers; and now KATS BVS 2-26 facilities use their own power generated by KPC GTPP and transmitted through West Kazakhstan oblast networks instead of purchasing it. An increased level of purchased energy for KPO Bolshoi Chagan Oil Pumping Station (OPS) and the KOGCF production units' in 2013 compared to the previous 2012 year was due to the KPO process units shutdown for Planned Preventive Maintenance activities (PPM). For 6 days the KPC GTPP was shutdown that required the additional purchase of the necessary power from the third-party supplier.

**Table 14. Purchase of electric power**

Electric power purchase, in MWh	2011	2012	2013
KATS (Atyrau, Block Valve Station 1-35)	1,779	1,959	1,667
Bolshoi Chagan OPS	62	0	16.46
Field production facilities (including KPC, Unit 2, Unit 3, Eco Centre, Gathering system and KOTS)	5,317	179	2,434

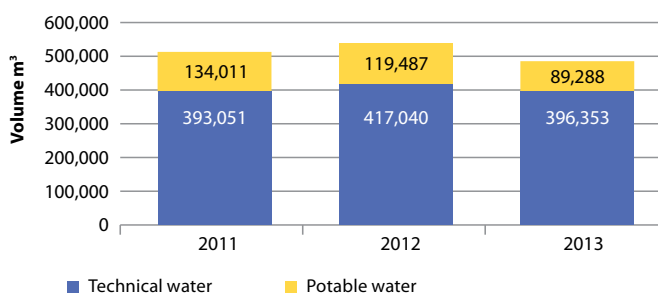


## WATER RESOURCES

The protection and rational use of water resources is a critical and high-priority task set for all humanity as water is not just industrial feedstock but, more importantly, is a primary source of life.

The total volume of water consumption at KPO in 2013 was 485,641 m<sup>3</sup>, including 396,353 m<sup>3</sup> of technical water and 89,288 m<sup>3</sup> of potable water.

**Graph 16. Water consumption at KPO**



**Table 15. Water consumption at KPO by sources, m<sup>3</sup>**

Water consumption	2011	Limit*, 2011	2012	Limit*, 2012	2013	Limit*, 2013
Zharsuatskiy water intake facility	132,446	-	117,843	-	86,820	-
Serebriakovskiy water intake facility	1,564.5	-	1,644	-	2,468	-
Kigach water intake facility	2,139	-	3,032	-	4,601	-
Konchubai gully water pond	390,912	528,280	414,008	578,904	391,752	578,904
Re-use	142,889	-	98,778	-	64,343	-
Drilling mud preparation	13,392	-	19,190	-	33,579	-
Irrigation purposes and hydrotesting	122,357	-	68,698	-	13,335	-
Dust suppression	7,140		10,890		17,429	

\* As per the RoK Special Water Use Permit for industrial needs



# CARING FOR THE ENVIRONMENT

## Technical Water

The Kigach water intake supplies Atyrau Terminal OPS with technical water through Astrakhan – Atyrau water line, where it is used for domestic and technical purposes. Water is supplied by «KazTransOil» JSC based on the contract with KPO.

Due to the inspection and technical examination of the fire water tanks, the volume of water intake for technical purposes at the Atyrau Terminal in 2013 totaled 4,601 m<sup>3</sup>, which was 50% higher than the 2012 volume of 3,032 m<sup>3</sup>.

The main source of water supply for technical needs in the Karachaganak field is the holding pond No.1 at Konchubai gully. KPO is a primary user holding the RoK Special Water Use Permit for industrial needs until 2015 with annual water intake limit of 578,904 m<sup>3</sup>.

In case of low amount of precipitations in winter, there is a risk of lowering of a water level required for water intake for KOGCF needs. The Company has two backup wells No.9 and 4 supplying the water of the technical quality.

Konchubai gully is not included into the list of fishery water bodies of local significance according to the Resolution of the West-Kazakhstan Oblast Akimat No.269 dated December 25, 2012 registered by the Department of Justice of the West-Kazakhstan oblast under No.3147 on January 14, 2013.

The water volume used for technical needs of KPO in 2013 totalled to 391,752 m<sup>3</sup> which constitutes 68% of the limit defined by the Permit for special water use in amount of 578,904 m<sup>3</sup>. In order to reduce fresh water intake for drilling mud preparation, watering of greenery, dust suppression on roads and construction sites, whilst drilling operations, and to avoid interstratal break-ups, the Company uses treated domestic, industrial wastewater and storm runoffs. In 2013, KPO re-used 64,343 m<sup>3</sup> of treated wastewater for technical needs. Detailed description of the use is shown in Table 15.

## Potable water

The source of potable water supply in the Karachaganak field is Zharsuatskiy water intake. Bolshoi Chagan OPS

potable water need is filled by Serebriakovskiy intake and Atyrau Terminal OPS – by Kigach. The company is a secondary water user; water supply to the facilities is carried out under the contracts.

The potable water is used exclusively for domestic needs of the facilities, except for Bolshoi Chagan OPS, where water is used to replenish fire tanks because of the absence of another source.

The volume of KPO's water use for domestic needs in 2013 totaled 89,288 m<sup>3</sup>, which is 25% less compared to 2012 (119,487 m<sup>3</sup>). Such decrease has become possible thanks to the Company's efforts aimed at efficient water use including the following steps:

- rationalization of water use;
- monitoring and complying with the limits and water use schedules established and approved by the Republic of Kazakhstan Regulatory Authorities;
- 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.

Water of the technical quality is used for domestic needs at the Atyrau Terminal. The volume of water intake consumed in 2013 totalled 1,044 m<sup>3</sup>, which is 10% higher than in 2012 (948 m<sup>3</sup>).

Drinking water accounting at the facilities is conducted using water metering devices and is recorded in the log book according to the primary accounting rules of the RoK.

## Discharges of treated wastewater

KPO aims to optimize the use of clean water at the enterprise through implementation of a set of measures for water resources conservation, and re-use of treated water, wherever possible.



*Konchubai gully at the Karachaganak Field*

To achieve these goals, the Company does not discharge treated wastewater into surface water bodies, but uses specially built facilities (holding ponds) for treated domestic and industrial wastewater and storm runoffs. These facilities not only exclude the penetration of contaminants into soil and groundwater, but also allow treated wastewater to be collected for re-use for technical needs, thereby reducing fresh water intake.

In 2013, permissible volume of wastewater discharge equaled to 921,994 m<sup>3</sup>. The actual volume of treated wastewater discharge amounts to 426,470 m<sup>3</sup>, which is 15% higher compared to 2012.

The following wastewater components are monitored:

- Domestic wastewater: pH, suspended solids, oil, ammonia nitrogen, nitrates, nitrites, BOD20 and BOD5, total ferrum, synthetic surfactants, sulfates, chlorides, phosphates, dry residue, dissolved oxygen;
- Industrial and storm wastewater and melt and rain wastewater: pH, suspended solids, oil products, dry residue;
- Process and associated formation wastewater: suspended solids, oil products, sulfides, sulfates, chlorides, hydrogen sulphide, methanol, ferrum, copper, zinc, aluminum.

Discharge limit for wastewater contaminants for 2013 was 18,395 tonnes. In total, 10,150.9 tonnes of contaminants were discharged in 2013, which is almost two times the 2012 volume. Out of this figure 5,318 tonnes complied with standard limits, and 4,832.9 tonnes exceeded the limits. Excessive concentrations are registered mainly for chlorides, oil products and nitrogen-ammonium components.

An increased volume of discharge and contaminants is caused by an intense injection of the process and associated formation wastewater containing a large amount of dissolved salts into subsurface.

Associated formation water produced together with crude hydrocarbons and process water is treated and injected into subsurface. Exceedance of limits is mainly

associated with an increased content of soluble salts in wastewater injected into subsurface. Groundwater is highly mineralized and is not used or cannot be used for domestic, drinking, balneological and process needs for irrigation and animal breeding. Injection has no effect on components of the environment, such as soil, vegetation, and wild animals.

Due to reliable water shutoff and soil properties which are ideal for preparation and injection of wastewater, migration of water into upper aquifers is eliminated. Wastewater injection is an international practice aimed at solving the problem of disposal of highly mineralized water flows without formation of salt-containing wastes on the surface whilst treatment.

Exceedance of nitrogen content limits (in the form of ammonia nitrogen, nitrite or nitrate ions) occurred in domestic wastewater discharged into the holding ponds. Exceedance of oil products and suspended solids limits in KPO wastewater was not detected. Water from holding ponds was used for irrigation purposes where the permissible content of nitrogen compounds is much higher than for water discharge.

At KPO facilities the following types of wastewater are produced: domestic, industrial, melt and rain, process and associated formation wastewater. Discharge of treated wastewater is conducted according to MPD (Maximum Permissible Discharges) Limits Project of contaminants discharged with wastewater into water bodies and subsurface formations. Currently, the MPD limits project for 2014 – 2015 and wastewater quality monitoring schedules are developed and approved by regulatory authorities. The Company has obtained a permit for construction and operation of underground facilities not related to exploration and production "Injection of industrial wastewater of Karachaganak field (KOGCF) into subsoil". According to the FPSA this Permit is valid until 2037, inclusive.

# CARING FOR THE ENVIRONMENT

**Table 16. Total discharge volume specifying the category of wastewater and receiving facility, m<sup>3</sup>**

Receiving facility	2011	2012	2013
Discharge of treated domestic wastewater, including	112,909	93,772	78,383
Injection of process and associated formation water including into underground disposal sites	266,250	265,118	342,458
Discharge of rain and melt water including onto the terrain	18,014	9,402	5,629
Total discharge volume	397,173	368,292	426,470

In order to improve the wastewater treatment quality in 2013 KPO continued the works on Phase II of the Project "Upgrade of the domestic and oily wastewater treatment plants at KPO facilities". The State expert review conclusions have been obtained for the detailed design documentation; and the equipment required to implement the design solutions is being procured.

Domestic wastewater treatment plants at KPC have been removed from operation, untreated wastewater is fed through discharge header to the Pilot Camp (KCC) treatment facilities.

In 2013, water metering devices were installed at the facilities of Atyrau Terminal OPS, Bolshoi Chagan OPS and Unit-3. The accounting of treated wastewater is being maintained according to the primary accounting rules. In 2013, all the water consumption limits agreed with the suppliers were met by the Company. The volumes of discharges approved by the Environmental emission permit were not exceeded.

In 2013, scientific and research work on the effectiveness of final biological treatment of KOGCF wastewater using Eichhorn (water hyacinth) was carried out. According to the research results and regulatory bodies' conclusions, further measures will be developed.

In 2013, the Operating procedure for treated wastewater re-use, which would enable to increase the level of wastewater re-use, to reduce surface sources fresh water consumption and to comply with established limits and water use schedule, were updated. Since 2014 discharge onto the KOGCF terrain has been excluded from the MPD limits project.

In order to assess the impact of production units and take timely measures to prevent, reduce and eliminate the impact on the quality of surface and subsurface water resources, these resources are continually monitored; water courses and potential contaminants migration is traced and documented; the compliance with current health and hygiene standards is verified.

## WASTE MANAGEMENT

In order to establish safe and effective system for waste management, reduction of actual and potential hazard to humans and environment posed by generated waste and based on production capacities, the Company adopted the following basic waste management methods:

- waste disposal at the KPO waste disposal sites;
- waste treatment at Eco Centre facilities;
- waste recovery to process stream;
- waste transfer to specialized contracting organizations for subsequent handling. Specialized contracting organizations, in their turn, conclude contracts with the receiving organizations dealing with waste placement, treatment and elimination.

Waste is disposed at the waste disposal facilities owned by KPO and equipped according to the documentation developed under the construction projects for the waste





disposal landfills and sites. While the cells of the waste disposal landfill are filled in, the leachate leakage resistant isolation layers are placed. Watertight screen consisting of the layer of clay and geomembrane of high density polyethylene is laid at the bottom of the landfill cells, which minimizes the potential environmental impact.

Before waste disposal at the landfill, waste is processed at the Eco Centre facilities, thereby reducing the number and hazardous properties of various types of the disposed waste.

Liquid waste treatment at the liquid treatment facility allowed 74.13 % of processed products to be re-used for the preparation of drilling mud and brines.

Putting into operation of the general purpose incinerator (GPI) will allow to reduce the quantity of KPO municipal waste disposed at the city dump by 95%.

Waste recovery to the process stream is the best possible way of waste re-use.

Generally, specialized contracting organizations independently decide on how to manage the KPO waste and quarterly submit reports on waste transfer to a third party.

In 2013, segregated collection of waste paper made it possible to reduce the quantity of KPO municipal waste at the city dump by 27.9 tonnes. In 2013, the above-mentioned quantity of waste paper collected within the framework of pilot project for waste paper collection and sorting from five KPO Aksai offices was transferred for recycling. Since the beginning of the project in 2010, collected waste paper in the amount of 62.1 tonnes has been sent for recycling to the WKO local enterprise manufacturing toilet paper. In 2014, it is planned to carry out segregated collection of waste paper from three offices located in the Karachaganak field.

Minimization of the quantity of waste disposal at the KPO waste disposal facilities is achieved by:

- The possibility to separate base oil and water from the oil-based waste drilling mud at thermo-mechanical cutting cleaning facility (TCCF). In 2013, 8,879.6 tonnes of wastes

were processed; 732.68 tonnes of base oil were separated and 7,665.24 tonnes of wastes after thermo-mechanical treatment were disposed at the waste landfill. As a result of that, the quantity of the KPO disposed waste was decreased by 13.7%;

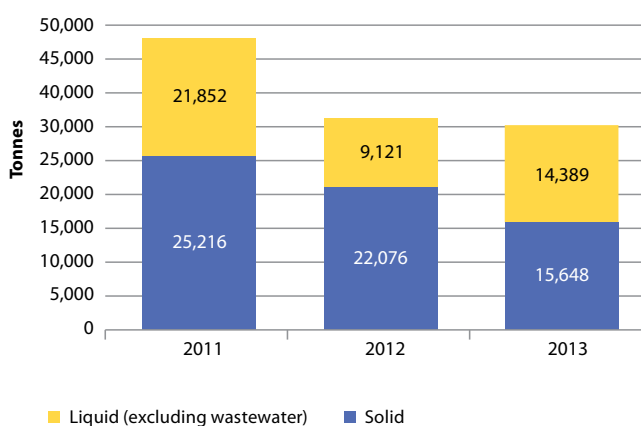
- The possibility to process liquid waste and wastewater at the liquid treatment facility. In 2013, 6,843.68 tonnes of liquid wastes were processed, of which 4,778 tonnes of treated water were re-used.

Waste movement recording is approved and maintained in accordance with the KPO Waste Management Procedure. Primary waste recording is conducted using Control coupons. The coupons are signed by the employees responsible for waste management at the facility, by the employees in charge of waste transportation, weigh scale operator and representative of the facility/organization receiving wastes for final elimination/disposal.

At all KPO sites/departments, the employees responsible for waste management keep the log books.

The below graph shows the dynamics of the waste generation. Total quantity of the waste generated at the KPO facilities over 2013 totals 30,037 tonnes, which is slightly lower than in 2012.

**Graph 17. Dynamics of the waste generation**





# CARING FOR THE ENVIRONMENT

Table 17 provides the details on generated hazardous and non-hazardous waste and handling methods applied by KPO

**Table 17. Quantity of generated, treated, disposed and recycled waste at KPO, in tonnes**

	Waste managed by KPO in 2013										
	1. Incineration					2. Recycling					
	Sent for incineration in the kiln	of which				Sent for recycling	of which				
		Incinerated	Transferred to contracting organization	Disposed at the Landfill after incineration	Temporary storage after recycling		Re-used after recycling	Further recycling	Further incineration	Disposed at the landfill after recycling	Decontaminated
Hazardous waste, generated during the reporting period	990	148	14	822	5	13,820	5,354	990	137	6,158	1,181
Non-hazardous waste, generated during the reporting period	7	0.77	0.107	6	0	0					
Hazardous waste accumulated on site in the previous years	6,912	770	107	6,035	0	1,280	106	67	2	1,105	
Non-hazardous waste, accumulated on site in the previous years	0	0	0	0	0	0					
Recycled products (secondary waste)	141	16	2	123	0	624	51.4	33	1	538	



Thermo-mechanical cuttings cleaning facility at the KPO Eco Centre

Waste managed by KPO in 2013			5. Waste transferred to the third party for further processing, use, incineration and disposal in 2013							
3. Re-use	4. Disposed at landfill	5. Accumulated on site	for recycling	for incineration	for disposal at the dump	for re-use	temporary storage	Generated in 2013	Generated in 2012	Generated in 2011
104	1,603	9,621	314	684	2,023	36	95	29,166	22,328	31,811
		201	37	39	499	4	84	871	8,869	17,588
50		40	4.4	117	27					
			0.623	0.007	207					

# CARING FOR THE ENVIRONMENT

## SPILLS

In 2013 one spill<sup>1</sup> incident occurred in the Karachaganak Field as a result of a road traffic incidents involving the vehicles of two KPO contractors. The volume of spilled diesel fuel was 2,700 litres. The responsible KPO contractor cleaned up the spill; the contaminated soil was properly utilized. The incident was reported to the RoK authorities and investigated to identify root causes. Corrective and preventive actions were taken to avoid recurrence of such incidents.

## GRYPHON AREA REMEDIATION

On the territory of KOGCF there is no contaminated land. The object of contamination before 2012 was the Gryphon area. Activities on biological remediation of the disturbed lands at the Gryphon area were completed at the end of 2011. KPO handed over the recovered 49.1 hectares land to State ownership.

In October 2013 KPO was awarded at the HSE achievements contest which was held under the scope of VIII KazEnergy Forum. The KPO project on the Gryphon area remediation at KOGCF was selected from the list of all projects admitted to the final round. This award is the recognition of continuous efforts of KPO in the area of health, safety and environment.

## BIODIVERSITY

In 2011 KPO developed the Biodiversity Conservation Action Plan. The main objective of the Plan is to conserve species and their habitat within the KOGCF in reconciliation with KPO activities and land used by other interested parties within the area.

The Plan sets measures for the monitoring and keeping records on biodiversity around the area of the KPO operational activities. Phase I planned for 2012 comprised field studies on recording rare fauna species within the territory of the KOGCF.

Phase II covered the following measures scheduled for 2013:

- vegetation monitoring within the area of KOGCF influence on the four impact factors (environmental emissions, physical impacts, water intake, grazing);
- satellite images review to identify changes in the ecosystems during three periods in order to determine changes in ecosystems. As it is known, prior to the field development the KOGCF area was used for agricultural purposes. At the moment, most of the territory is occupied by the deposits with the dominance of weed species and wormwood;

- mapping of the coastal ecosystems of water bodies at KOGCF (Berezovka river, Konchubai gully);
- the studies of Russian Fritillary expansion listed in the Red Book of the Republic of Kazakhstan. Based on the earlier field studies of flora and fauna, populations of Russian Fritillary (*Fritillaria ruthenica*) were recorded at 4 sites. In 2013, one more site was detected where Russian grouse species had been found. Overall increase in the number of *Fritillaria ruthenica* in 2013 compared to 2010 is likely to be caused by the climatic conditions that favor this species. Further monitoring of Russian grouse expansion is scheduled for 2016.

The table 18 lists the species recorded from the KOGCF that are of greatest importance for nature conservation. It is important for KPO to consider the presence of these species when planning or undertaking operations in the area, but is not appropriate to consider their presence or numbers as indicators of KPO's environmental performance. This is because their populations are subject to changes that may occur due to forces operating at global and landscape scales that are nothing to do with KPO operations. Any fluctuations in the abundance of these species would need to be seen in the wider context of trends in a species' populations. Operations will be undertaken in such a way as not to cause direct or indirect impacts on individual species' populations.

According to the results of conducted work, any impact of KOGCF activities on biodiversity has not been identified. In order to track the changes in the biodiversity inhabiting the area under study, the monitoring of flora and fauna will be continued in subsequent years.

The following categories are used in the table 18:

- NT: Near Threatened – usually species whose populations are declining to the extent that they will soon qualify for a higher threat category.
- VU: Vulnerable - species that are facing a high risk of extinction in the wild.
- Kazakhstan Red Data Book - species that are recognized as nationally rare in the Red Data Book of Kazakhstan; Roman numerals indicate the various rarity categories, with I the rarest and V the least rare.

<sup>1</sup>The definition of a significant spill is applied to an incident, which has caused contamination of the environment through hydrocarbon/chemical spills to land or water and volume of spilled hydrocarbon/chemical exceeding 1000 litres (as per KPO Incident classification).



**Table 18. Species of high value for nature conservation recorded at the KOGCF**

Nº	Species	IUCN Category	Red Data Book	Locally Rare (in the KOGCF)
<b>Plants</b>				
1.	Andrzejowski Pink ( <i>Dianthus andrzejowski</i> )	-	-	✓
2.	Bieberstein tulip ( <i>Tulipa biebersteiniana</i> )	-	RDBI	✓
3.	Pasque flower ( <i>Pulsatilla patens</i> )	-	RDBI	✓
4.	Russian Fritillary ( <i>Fritillaria ruthenica</i> )	-	-	✓
5.	Shrenk tulip ( <i>Tulipa shrenkii</i> )	-	RDBI	✓
<b>Animals</b>				
<b>Insects</b>				
6.	Anax imperator (a dragonfly)	-	RDB	-
7.	Bolivaria brachyptera (a Mantis)	-	RDB	-
<b>Birds</b>				
8.	Demoiselle ( <i>Anthropoides virgo</i> )	-	RDBI	✓
9.	Common owl ( <i>Bubo bubo</i> )	LR	RDBII	-
10.	Imperial eagle ( <i>Aquila heliaca</i> )	VU	RDBII	✓
11.	European Roller ( <i>Coracias garrulus</i> )	NT	-	✓
12.	Lesser Kestrel ( <i>Falco naumanni</i> )	VU	-	✓
13.	Little bustard ( <i>Tetrax tetrax</i> )	NT	RDBIII	✓
14.	Mute Swan ( <i>Cygnus olor</i> )	-	-	✓
15.	Osprey ( <i>Pandion Haliaeetus</i> )	LR	RDBI	-
16.	Pallid Harrier ( <i>Circus macrourus</i> )	NT	-	✓
17.	Red-footed Falcon ( <i>Falco vespertinus</i> )	NT	-	✓
18.	Steppe Eagle ( <i>Aquila nipalensis</i> )	-	RDBI	-
19.	White-tailed eagle ( <i>Haliaeetus albicilla</i> )	-	RDBIII	✓
<b>Reptiles</b>				
20.	Meadow Viper ( <i>Vipera ursinii renardi</i> )	VU	-	✓
<b>Mammals</b>				
21.	Beaver ( <i>Castor fiber</i> )	-	-	-

■ LR: Locally rare – species that are native to Kazakhstan and rare in the KOGCF, although they may be widespread nationally and globally. This sub-category includes species

that have small populations in the KOGCF, with specific habitat requirements and are thus vulnerable to extinction from local area.



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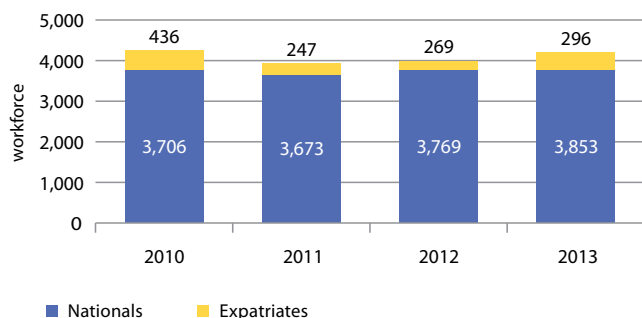


At the OPITO graduation ceremony

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.

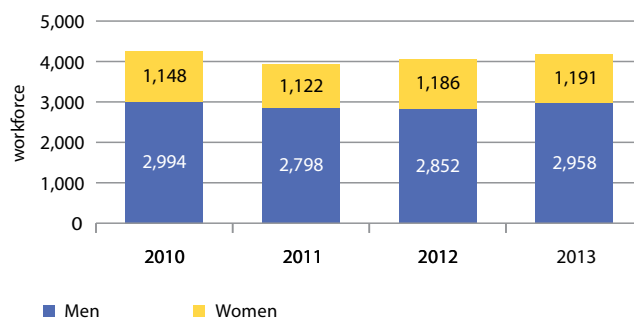
The total number of KPO employees (both core organization and temporary projects) in 2013 made up to 4,149 people, 3,853 of which are Kazakhstani nationals and 296 expatriates.

**Graph 18. KPO workforce**



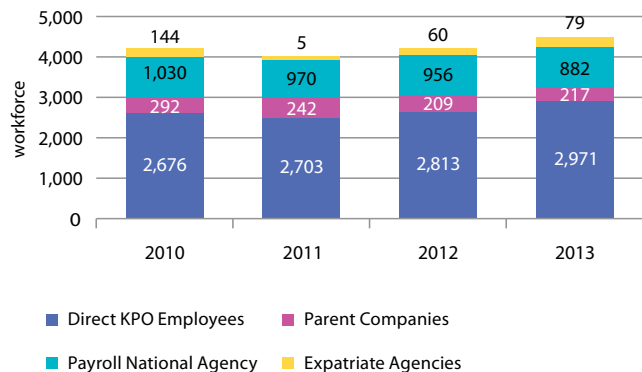
Split by the gender category is shown in the graph 19, 2,958 male and 1,191 female employees worked at KPO in 2013.

**Graph 19. KPO workforce by Gender**



Total workforce by employment contract for 2013 and previous years is represented in Graph 20.

**Graph 20. KPO workforce by contract type**



Employees with fixed term of employment contract are regarded as temporary employees.



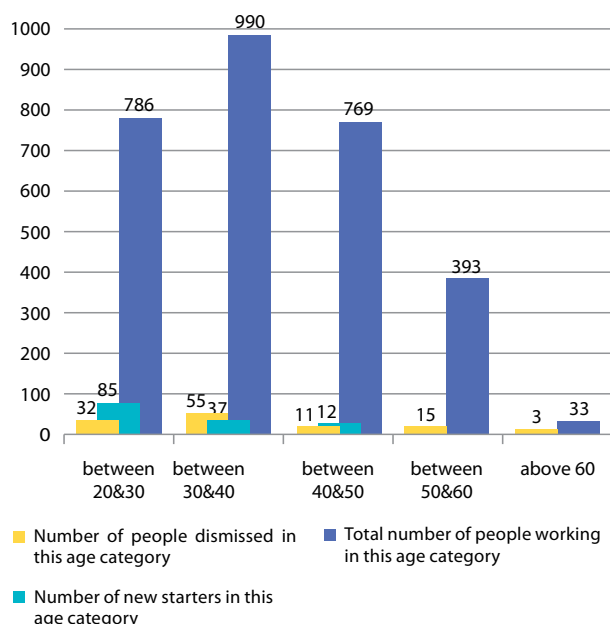
The following map represents the percentage of KPO workforce split by work location.



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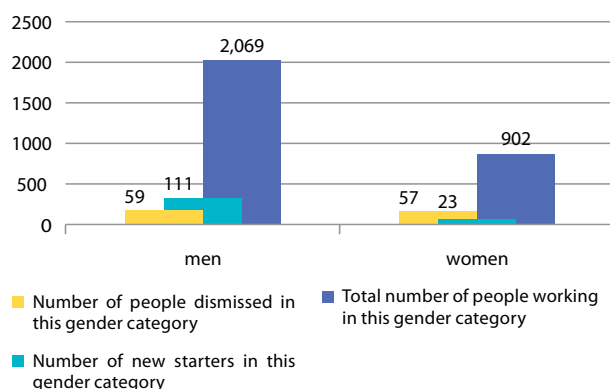
The total number of KPO direct employees leaving employment and newcomers during the reporting period broken down by age is shown in Graph 21. This graph includes both permanent contract and temporary contract employees.

**Graph 21. KPO employee hires and turnover**



The Graph 22 shows the total number of employees leaving employment and newcomers in 2013, broken down by gender.

**Graph 22. KPO employee hires and turnover by gender**



KPO is constantly engaging its employees in various events, meetings, forums. An example of this engagement is a KPO Welcome Day held in November 2013. The event was dedicated to the newcomers, who joined the Company in the past year. The aim of the event was to tell new employees about KPO and provide them with opportunity to ask questions. KPO departments made presentations to brief the newcomers on the key activities and functions of their departments, and shared information on career development opportunities, educational and scholarship programmes in KPO. Welcome Day is a good chance for new employees to get to know more about the company and its processes.

## TRAINING AND DEVELOPMENT

We support the continued growth and development of our employees addressing their learning and development needs with effective solutions. Custom development activities offered by Training and Development department include the following:

- International qualifications;
- Language training, computer competence and business skills training;
- Professional training;
- Leadership Coaching;
- Mandatory HSE training.

This approach allows the company to ensure that:

- Employees meet the competency (skill, knowledge) requirements in order to improve and maintain effective job performance and support the stated corporate business goals;
- Employees are prepared to assume greater roles with more responsibilities within the organisation, and supporting talented and motivated individuals to fill critical positions.



KPO employees at the parade on the Kazakhstan Unity day in Aksai

Such approach requires continuous evaluation of development needs across the business and it enables us to tailor professional development plans to the specific needs of an individual in a specific Company area, thus maximising results. 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.

In February 2013, 38 KPO employees have successfully completed a certified management programme delivered by the UK Institute of Leadership & Management (ILM). As the result of programme completion, 9 of them received a Diploma and 29 - International Certificates in Management.

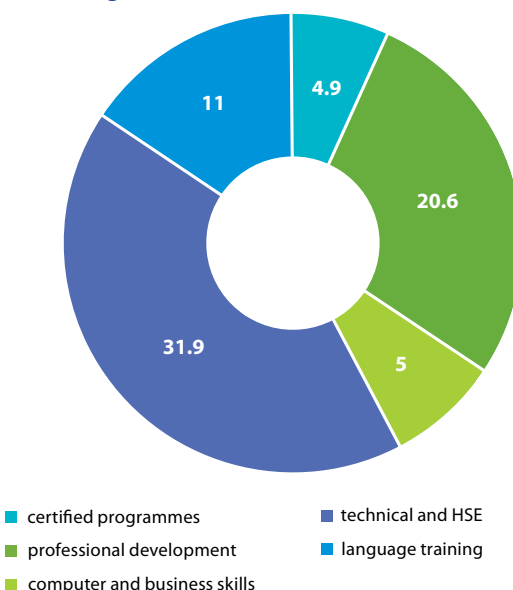
Additionally, 32 young graduates successfully completed the programme for Production and Maintenance Engineers at the OPITO Oil and Gas Academy standards, and are being employed by the Company on various engineering roles.

Another facet of training and development at KPO is the expansion of opportunities to attend internationally certified programmes. The 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.

In 2013, 430,051 hours of training were delivered, out of which 282,568 hours were provided to the Company employees. The average number of training hours per employee is demonstrated in Graph 23. In terms of average expenditure, this corresponds to USD 603 per attendant spent on training in 2013.

Out of the total number of training hours delivered in 2013, 146,017 hours of mandatory HSE trainings were provided to contractor organisations' employees working in the Karachaganak Project.

**Graph 23. Average training hours per employee by type of training**



**Table 19. Training by employee categories**

Management	310 persons (64.5 hours per employee)
Professional staff and supervisors	1,988 employees (66.6 hours per employee)
Technical staff	956 employees (115.3 hours per employee)
Support and clerical staff	599 employees (15.4 hours per employee)

Training provided to company employees in 2013 is broken down in Table 19.

In March 2012 KPO launched the online training for the "Life Savers" Programme. In 2013, 3,820 employees were trained as part of the mandatory online training programme, including the contractors' staff.

In total 41,934 courses were provided in 2013; 25,591 of them - to the employees of contractor organisations.



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## **Competency Management System Development**

The Competency Management System (CMS) is designed to manage the personnel development process and constitutes a significant step in implementation of training and development targets.

During previous years KPO worked on achievement of CMS accreditation by OPITO (international organization for training and development for oil & gas companies), and in 2013 KPO CMS received external certification by OPITO. KPO thus has become the first OPITO certified oil & gas production company in Central Asia.

To ensure effective use of its competency management system, KPO continuously trains its national personnel to be accredited with the internationally recognised OPITO Assessor Qualification. In 2013, 10 additional employees of the Production & Maintenance Department have been trained on the OPITO Approved Competence Assessor Award Programme. 10 employees of the Production and Maintenance Department received Certificates of the OPITO Approved Competence Assessor Award, having completed the OPITO Approved Competence Verifier Award Programme. The title of an OPITO Approved Competence Verifier is intended for organisations, which require a competence assessment as part of competency management programme.

We plan to carry out nearly 24,800 assessments including HSE Life Savers across Production and Maintenance Departments' front line personnel.

## **DEVELOPMENT OF THE NATIONAL PERSONNEL**

Workforce nationalization is a crucial building block in the creation of the KPO's economic legacy, maximising the number of local employment opportunities and investing into Kazakhstani workforce.

The KPO nationalization strategy is closely linked to the main strategy of the Company. In order to deliver on nationalization targets, and at the same time improving organizational capabilities particularly in the area of management, the strategy relies not just on the development of knowledge and technical skills, but on the

overall management capabilities and experience of the individuals involved.

The scope of the Nationalization Program encompasses only the core KPO organization. These are all functional areas with the exception of long-term and short-term projects. The rationale for exempting projects from the Nationalization Program is that each of them has a limited life-span and is not permanent in nature. Project staff, both expatriate and national, is considered temporary hired to perform a strictly defined scope of work within the framework of the development and completion of a project. The expectation is that upon completion of the project staff will be redeployed to other positions within the KPO organization where possible, or released back on to the job market.

The strategic approach of HR towards the nationalization process is based on the effective planning and implementation of competency development process rather than on the mere replacement of expatriate personnel with Kazakhstani staff. This approach ensures that all KPO operations are carried out on a high quality and in accordance with international standards. It is worth to note that nationalization process is implemented not only by nationalizing expatriate positions, but also by creating new national positions within the structure.

Summarizing the year of 2013, the year-end nationalization percentage has reached 68% in category 1, and 94% in category 2. The number of nationalized senior and middle management positions is 8 and 9 positions of professional staff and supervisors respectively. The overall nationalization percentage in KPO hasn't changed since 2012 and equals to 93%.

Dynamics of local content in personnel reflects any changes of business needs and depends on venture initiatives aimed at the Karachaganak future growth project. In 2013 company business needs required attracting worldwide expertise, which is not currently available on the local labour market having resulted in increase of expatriate staff to 1% in categories 1 and 2. At the same time the number of senior and middle management positions at the KPO core structure steadily grows.



KPO employees received International certificates on STEP Programme

In fact, the number of national employees in category 1 – Senior and Middle management - in 2010 was 247, in 2011 – 259, in 2012 -287, and in 2013 it reached 303 people.

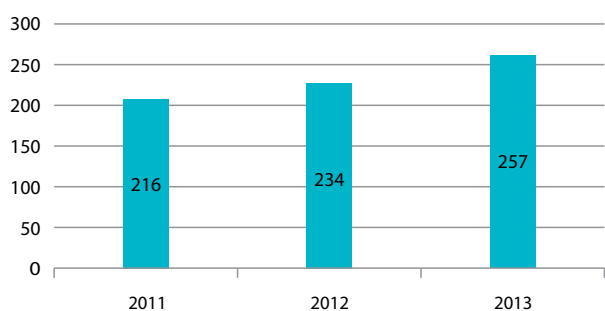
Nevertheless KPO is determined to continue its nationalization strategy to achieve and keep 70% in category 1 within next years.

**Table 20. Nationalization Plan by categories**

Category	Description	2012	2013
1	Management	69%	68%
2	Professional staff and supervisors	95%	94%
3	Technical staff	100%	100%
4	Support and clerical staff	100%	100%

The Graph 24 shows the total number of expatriate workers in the core organisation.

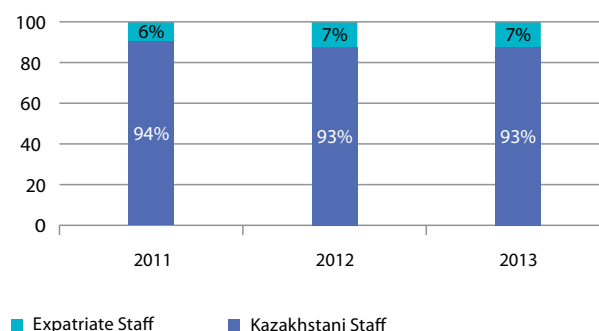
**Graph 24. Number of Expatriates in 2011 - 2013**



■ Number of Expatriates

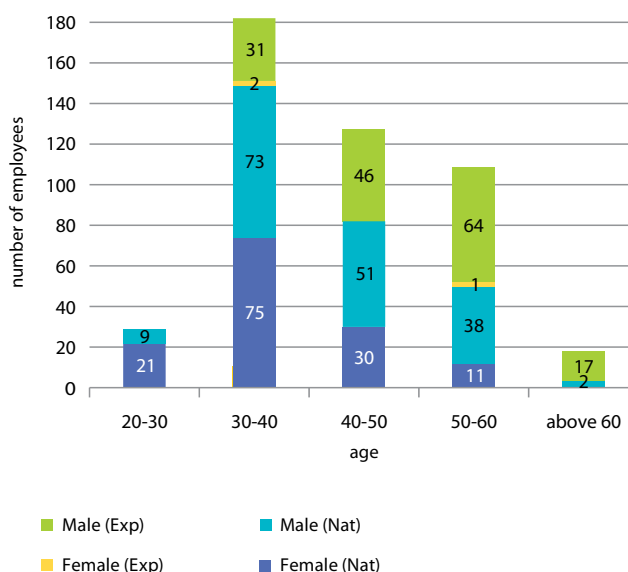
Graph 25 provides data on national and expatriate staff content in the core organisation.

**Graph 25. Content of national and expatriate staff in 2011- 2013**



The overall number of senior and middle managers in whole KPO structure including the core organization and temporary projects, expatriates and nationals, split by age and gender is reflected in Graph 26.

**Graph 26. KPO National / Expatriate Managers by age and gender**



# PEOPLE ARE OUR ASSET

## EMPLOYEE RELATIONS

The rights of KPO employees to participate in associations and collective bargaining are fully respected. One of the major roles in supporting rights of employees to exercise freedom of association and collective bargaining is assigned to Trade Unions.

There are two Trade Unions that represent interests of KPO employees. The trade unions act upon the Collective agreements that cover various issues of labour relations. The Collective agreements apply to all direct KPO Employees regardless their membership in the Trade Unions. The agreements are reviewed every two years.

As per signed Collective agreements in 2012, Employer (KPO) is obliged to notify Trade Unions regarding liquidation of the Company with consequent reduction of staff number, change of form, system and amount of remuneration causing deterioration of employees' status, 2 months (8 weeks) prior to such changes at latest.

Employee relations department deals with disputes regulation and grievances received via appropriate grievance mechanisms. Total number of received grievances about labour practices for the reported period – 33, by the following breakdown: labour disputes – 2; reports made via the anonymous Hotline – 23; grievances, received by HR directly – 8. All grievances were resolved.

For insufficient attention paid by contractors and subcontractors to a number of compliance requirements there is a risk of violations in exercise freedom in association or collective bargaining and incidents of forced or compulsory labour.

KPO as the general customer from its own side provides clarifications of the legislation requirements and internal procedures/policies to all contractors on the permanent basis. For example, employees of 14 contracting companies are members of the Karachaganak Trade Union of KPO, which is the regional branch of "The Trade Union of Employees working in Gas industry, Transport and Construction".

Also, KPO participates in various meetings, round tables, associations, etc. to interact with authorities, oil and gas companies on the issues of RoK legislation observation.

As foreseen by the Collective Agreements, KPO retirement plan includes the Programme on Voluntary Dissolution of Employment Relationship with provision of benefits for male employees – 58-63 years and female employees – 53-58 years. The Voluntary Dissolution Programme is the monetary compensation in the amount of employees' gross monthly salary (not including any other payments (bonuses or overtime, etc) for the period of not less than 6 (six) months salaries and not exceeding 36 (thirty six) months salaries depending on age. The Programme on voluntary dissolution of employment relationship applies for KPO employees who have employment agreement with indefinite validity and length of service in KPO not less than 10 years.

In addition, every year KPO pays material aid in amount of KZT 75,000 only to KPO pensioners. This payment is also reflected in the current Collective Agreements. Also, as a gesture of goodwill, KPO keeps medical insurance during 3-5 years for employees, who retired from the Company.

## COMPENSATION AND BENEFITS

Compensation and benefits package in KPO is being provided to all direct employees. During 2013 KPO continued the compensation activities aimed at improving the recruitment, retention and motivation of its national staff.

KPO reviews the salaries of its personnel on an annual basis. In 2013, the process of salary review included the following:

- 8% Cost-of-living increase applied starting from January 2013;
- Individual upgrades and salary increases;
- Annual bonus on employees performance based on the annual performance development review (PDR);
- Housing Allowance was provided for all employees working on a shift pattern and residing outside Aksai.

In addition Production bonus in the amount of KZT 154,330 was paid in November.

Fringe benefits are an important part of the employment package and consist of financial and non-financial elements. The benefits provided in 2013 include the following:



Charity cycle race from Orenburg to Aksai with participation of KPO Trade Union

#### Financial benefits:

- End-of-year bonus (100% of base salary);
- Lump sum payment for health recovery needs (100% of base salary);
- Bonus for the RoK Oil and Gas Worker's Day (100% of base salary);
- Cash payment for a child birth;
- Start salary for young specialists is not less than 120,000 KZT;
- Benefit for Afghan veterans - 18,000 KZT (monthly);
- Maternity benefit - 240,000 KZT;
- Jubilee bonus – 25,000 KZT;
- 8<sup>th</sup> March bonus – 10,000 KZT for female employees;
- Financial aid to a deceased employee's family (12 months base salaries and a material aid for funerals);
- Financial aid in case of death of employee's family member;
- Financial aid in case of death of a KPO pensioner;
- Social aid for KPO pensioners;
- Sanatorium treatment payment – KZT 200,000;
- A salary advance for social purposes to the Company employees in the amount of not more than 4 (four) monthly salaries as per the Company policy;
- Program of Voluntary Dissolution of Employment Relationship with provision of benefits for male employees who reached the age of 58 years and female employees who reached the age of 53 years;
- A loyalty allowance for KPO seniority employees on a monthly basis.

#### Non-financial benefits:

- Medical insurance for employees and their family members;
- Educational grants for KPO employees;

- New Year gifts for employees' children till the age of 14;
- Additional vacation days for field staff, sportsmen, study purposes, funerals, weddings, illness;
- Free transportation to work place, free meals for employees who work in the field.

KPO has an annual performance and development review procedure to ensure continuous performance improvement in all aspects of the Company activities. The performance review procedure applies to all direct KPO employees hired prior to the 1<sup>st</sup> of July and who worked at least for six calendar months during the year prior to appraisal.

Employees hired to KPO via agencies are covered by Collective Agreements of such agencies. Specific benefits to be provided, including the budget, are agreed between KPO and agencies.

#### KPO SCHOLARSHIP PROGRAMME AND PARTNERSHIP WITH UNIVERSITIES

Since 2002 KPO has been supporting its employees and their children in their aim to enhance higher education by granting scholarships.

In 2013, 28 employees and 35 children of employees received scholarship - for a total of USD 220,500. Since the start of this programme in 2002, 160 employees and 341 children have received scholarships totalling USD 1,517,523.

KPO maintains partnership with many local universities and works with students and graduates. As part of this programme a delegation from the KPO Reservoir and Petroleum Engineering Department has visited the Aksai Technical College and the West Kazakhstan Agrarian -Technical University, on the Oil and Gas Industry Workers Day celebration and made a presentation during which students and teachers had an opportunity to ask questions about specifics of the oil & gas industry.

This year following the KPO Student Placement Programme 385 students from 26 educational institutions on 21 specialities have been placed in different departments of the company.



# IN DIALOGUE WITH THE COMMUNITIES

KPO is committed to being a good neighbour to the communities around its operations and to supporting local development goals in line with local government priorities. We therefore work to avoid or minimise negative impacts and maximise the benefits from our presence, maintain an effective communication and relationship with all stakeholders, and create opportunities to enhance benefits to the society.

## STRATEGIC APPROACH IN COMMUNITY ENGAGEMENT

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. Focus is given to communities in our area of direct impact, defined by the proximity to the KPO operations. In March 2013, KPO issued its 2013 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 the 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 the local authorities, NGOs and other key stakeholders.

Village Councils covering the eight villages closest to the field were set up in 2005 by a tripartite Memorandum of Understanding between KPO, WKO Burlin Region Maslikhat and Akimat in the four rural districts around the Karachaganak field. The Memorandum of Understanding including the 2013 community development programmes was re-signed on the 19<sup>th</sup> March, 2013.

Village Councils are attended by locally trusted village residents, representatives from the local authorities, initiative groups and KPO experts. The Village Councils meet regularly and on an ad-hoc basis to raise issues of interest or concern and receive updates on current and planned KPO activities.

*KPO donated ambulances to Aksai regional hospital*

The Village Councils are also consulted to help identify priorities for the KPO's social and economic investment in the villages.

This dialogue enables KPO to respond to issues, discuss proposals and initiatives as they emerge and develop opportunities, which benefit both KPO and the neighbouring communities.

In 2013, the Village Councils had a total of 21 sessions. During the meetings the Village Council members and KPO Community Relations staff discussed community development programmes to be implemented with KPO support. In particular, at the beginning of 2013 the KPO specialists presented the company's 2013 Social Performance Plan to local communities and discussed its implementation in each of the four neighbouring rural districts. In summer, 2013 KPO Community Relations team presented and disseminated the 2012 Sustainability Report amongst community members.

Given the local communities' concerns and issues raised during the Village Councils, KPO organised presentations on the interim results of the environmental surveys and





*At the Public hearings on the KPO Environmental Protection Measures Plan for 2014 in the Burlin Akimat*

the geo-dynamic monitoring held in the Berezovka Village, involving the responsible contracting companies.

A research survey, started in 2011, to review the quality of vegetables, soil and water, including the livestock physiological condition in Berezovka Village was continued in 2013. The research covering the period from 2011 until 2014 is focused on monitoring of pollutants concentration in environmental components and the agricultural products. The results of this study indicate that the environmental conditions of Berezovka village is not different from Dolinnoye village which was selected as baseline and is located at a distance of 80 km from the KPO operations. The long-term monitoring will obtain the data needed to assess the dynamic condition of ecosystems in the villages adjacent to the KOGCF.

KPO also conducted research into the formation of sink holes around Berezovka Village and communicated the findings in meetings with the local community. KPO's long-term geodynamic monitoring investigates factors in the subsurface that are causing the formation of sinkholes. Monitoring programme included drilling of four wells in the Karachaganak field: one in 2013 and three in 2012. The lithology and stratigraphic core studies and well logging of three wells showed that sulphate rocks occur at a depth of 200-250 m, above the salt formation. KPO specialists suppose groundwater inflows through a permeable layer and dissolving of sulphate rocks over time eventually causing upper salt deposits to collapse, under gravity, resulting in the collapse of an arch with relief subsidence and sinkhole formed at the surface.

## **PUBLIC HEARING**

In June 2013, KPO hosted a Public Hearing on 2014 Environment Protective Measures Plan with the support of the Burlin Region Maslikhat (Council) and Akimat in Aksai and Bolshoi Chagan Village. 104 people, including the residents of the Karachaganak Field adjacent villages and the Bolshoi Chagan Village located along the Karachaganak-Bolshoi Chagan-Atyrau export pipeline members of interest groups, members of local NGOs and mass media took an

active participation in the public hearing. The attendees were provided with the information on the environment protective measures planned for 2014.

The KPO's priority environment protection areas include water resources conservation, waste management and consumption, and air protection. In the follow-up discussions, the community, government authorities and mass media representatives had an opportunity to ask questions about air quality, tree-planting measures and used water resources processing.

In October 2013 KPO held a public hearing on "Landscaping and Tree Planting" Project as part of the "The Karachaganak Oil & Gas Condensate Field Established Sanitary Protection Zone (SPZ) Project in Aksai.

The mentioned Project was developed on the basis of the existing legislative Sanitary & Hygiene requirements on establishment of SPZ area for process facilities.

During the presentation of the Landscaping and Tree Planting Activities Project, the representatives of the Kazakhstan association of Applied Ecology informed that the total area of the land plot intended for the greenery development during the whole project cycle in the established SPZ area and the 6 adjacent communities makes 495.49 hectares, out of which 198.32 hectares is planned for the new green construction scope of work. The works on reconstruction will be implemented in the area of 297.17 hectares.

133 people, including members of the general public, local community and authorities who attended the public hearing had an opportunity to ask questions concerning this project and make comments and proposals on landscaping and tree planting around the town of Aksai, construction of parking area in the neighbouring communities, repair of roads around the Karachaganak Field area, involvement of neighbouring communities' members into the landscaping and maintenance activities. All these comments and proposals were included into the Public Hearing Minutes which were made publicly available by the local authorities for a seven day review period.

# IN DIALOGUE WITH THE COMMUNITIES

## HANDLING COMPLAINTS AND SUGGESTIONS

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

In 2013 four grievances were lodged by local community members through the existing formal Grievance procedure. Two complaints were about smell of gas in a neighbouring community; one was about temporary outage of potable water supply system in Berezovka community during the summer and one on improvement of living conditions of a local resident. All of the grievances were reviewed by KPO and closed following discussions with the complainants by phone or face-to-face meetings.

## Complaint to the Organisation of Economic Cooperation & Development (OECD)

In 2013 KPO parent companies in the UK, Italy and the USA received a complaint under the Organisation of Economic Cooperation & Development (OECD) Guidelines for Multinational Enterprises. The complaint was made by international and local NGOs seeking the support in resolving the issue of the resettlement of Berezovka Village, based on alleged environmental and health risks posed by KPO's operations. KPO (on behalf of the parent companies) carefully reviewed the complaint and provided the UK National Contact Point (NCP) for the OECD Guidelines with details of its environmental compliance activities carried out in the Republic of Kazakhstan.

In accordance with the OECD Guidelines, the UK NCP reviewed the parties' arguments and issued its initial assessment concluding that the issue of the resettlement of Berezovka Village based on the NGOs' allegations against KPO and its parent companies was not substantiated. The



*Village Council in Berezovka*



UK NCP proposed a conciliation/mediation process to the Parties to investigate the limited issue of resettlement of two households (formerly) situated within the KPO's sanitary protection zone (SPZ). The proposed mediation is currently being reviewed by KPO's parent companies.

### **Monitoring and preventing impacts on local communities**

A Sanitary Protection Zone (SPZ) exists along the perimeter of Karachaganak Oil Gas Condensate Field (KOGCF) with the aim to act as a buffer zone between the industrial plant and the communities. The Sanitary Protection Zone is a protective barrier ensuring reliable level of safety for the population during facilities operation in normal process mode.

In accordance with the 2011-2013 KPO Environmental Protection Measures Plan approved by the RoK Ministry of Environmental Protection and in connection with commissioning of the 4th condensate stabilization train in 2011 KPO updated its SPZ Project. The SPZ project was developed in two stages:

Stage 1 – development of the Design-based or estimated SPZ (in 2011);

Conducting an annual cycle of observations at the border of the design-based SPZ (in 2012).

Stage 2 – Development of the established (final) SPZ for the Karachaganak Field given the results of the annual cycle of observations (2013).

In 2012, KPO agreed the estimated SPZ project with the RoK Ministry of Health obtaining conclusion No.46 dated 04.04.2012 and commenced a one-year Field Observations Programme. The programme comprised detection of pollutants concentrations in the atmospheric air, in order to validate the accuracy of the estimated SPZ. Air sampling and tests were conducted per 4 compass points (N, E, W, S) of the SPZ involving the Government Sanitary-Epidemiological Surveillance authorities (SSES) and the accredited contractor laboratory. Upon completion of the field observations programme, KPO proceeded to developing the established SPZ project.

In 2013 the Established SPZ Project was approved by Conclusion of the RoK Ministry of Health N27 dated 04.10.2013. Relevant information on the public hearing is provided on page 73 in this Chapter.

KPO conducts monitoring in accordance with the Production Environmental Control (PEC) Programme, which includes the following three functions: operational, emission and impact monitoring.

The environment monitoring includes a wide range of observations, such as: environment components condition covering surface water basins, underground waters, and soil, as well as daily monitoring of atmospheric air quality at the sanitary protection zone boundary and adjacent communities, and emission monitoring covering production emissions, waste waters, and industrial waste. The monitoring system includes observations in the Karachaganak Field area, along the KPC-Bolshoi Chagan-Atyrau export pipeline, at the SPZ boundary and the communities adjacent to the Field.

Air monitoring system includes, but is not limited to:

■ **Continuous air monitoring via stationary automatic environmental monitoring stations (EMS).** 18 automatic EMS are installed within KOGCF and along the perimeter of the SPZ, including two automatic EMSs installed in Berezovka Community and two stations (EMS 016 and 017) that were installed in November 2013 on the north-east and north-west of the SPZ boundary. Environmental Monitoring Stations are in continuous operation and integrated into the automatic system of environmental monitoring. The Automatic environmental monitoring system serves as a notification system and a system of collecting data on air quality within KOGCF.

The notification system activates an alarm when the level of pollutants in the air emitted as a result of production activities at the field units exceeds the relevant allowable limits. Environmental Monitoring Stations enable to gather real-time data on air quality and volume in terms of main pollutants such as hydrogen sulphide (H<sub>2</sub>S), sulphur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>) and carbon monoxide (CO).



# IN DIALOGUE WITH THE COMMUNITIES

The registered concentrations of monitored components are compared with the sanitary standards and expressed as fraction of maximum permissible concentration (MPC) in order to determine the level of environmental pollution.

The MPC is the limit concentration of a polluting substance. In case if monitored polluting substance is below MPC, it means that it:

- has no direct or indirect impact on the present or future generations during lifetime;

- does not reduce human capacity for work;

- does not worsen human health and sanitary and living conditions.

According to the data from the automated EMS installed at the KOGCF SPZ boundary, the average annual concentrations of monitored components in 2013 did not exceed the MPC as shown in Table 21 below.

**Table 21. Annual average concentrations of monitored components in 2013 by EMSs**

Monitored components	Actual average concentration, mg/m <sup>3</sup>	MPC daily average, mg/m <sup>3</sup>	MPC rates**	MPC exceedance, frequency
H <sub>2</sub> S	0.001	0.008*	0.13	-
SO <sub>2</sub>	0.006	0.125	0.05	-
NO <sub>2</sub>	0.005	0.04	0.13	-
CO	0.6	3.0	0.2	-

\* MPC one-time. MPC daily average for hydrogen sulphide is not established, so MPC one-time is used for comparison.

\*\* MPC rate = Actual average concentration divided by MPC

According to the data from the automated EMS 013 и 014, installed in the Beryozovka village, the concentrations of monitored components did not exceed the MPC, and their annual average values were as follows:

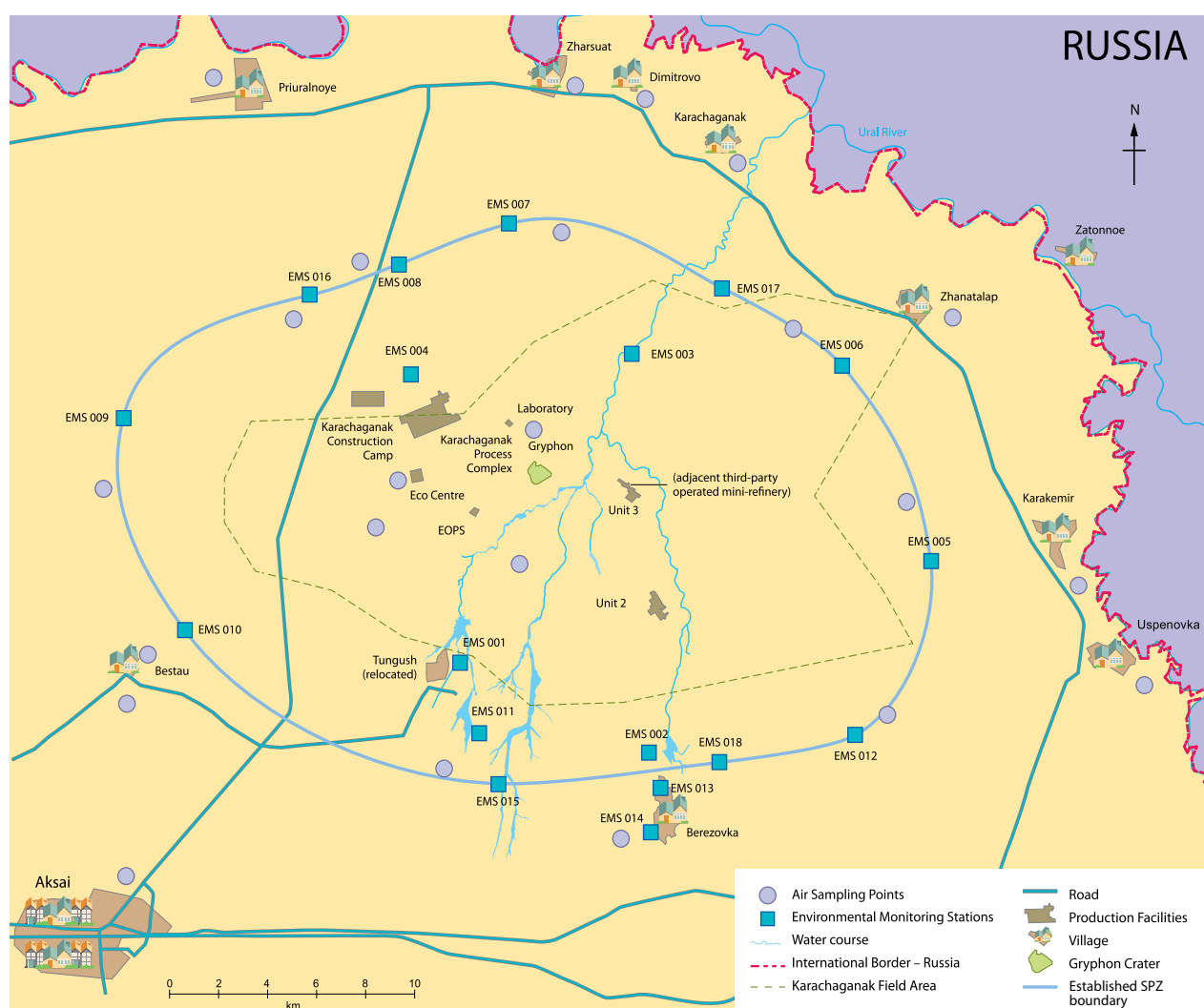
**Table 22. Annual average concentrations of monitored components in 2013 by EMSs # 013, 014 in Berezovka village**

Monitored components	Actual average concentration, mg/m <sup>3</sup>	MPC daily average, mg/m <sup>3</sup>	MPC rates**	MPC exceedance, frequency
H <sub>2</sub> S	0.001	0.008*	0.13	-
SO <sub>2</sub>	0.004	0.125	0.03	-
NO <sub>2</sub>	0.017	0.04	0.43	-
CO	0.09	3.0	0.03	-

\* MPC one-time. MPC daily average for hydrogen sulphide is not established, so MPC one-time is used for comparison.

\*\*MPC rate = Actual average concentration divided by MPC

**Layout of the Environmental Monitoring Stations and Air sampling points within the Karachaganak Field, at the SPZ boundary and in adjacent communities along the perimeter of KOGCF.**



■ **Sampling and test of air samples at the boundary of the existing SPZ.** In accordance with the 2011-2013 Environmental Monitoring Programme, the air sampling at the boundary of KOGCF SPZ is conducted in compliance with the established Rules and Government Standards. Sampling of the pollutants content in the ambient air is carried out four times per day at 1, 7, 13 and 19 o'clock

on 8 rhumbs, i.e. in the direction of the eight points of compass (North, South, West, East, N-W, N-E, S-W, S-E) from the KOGCF as indicated on the map. So, the overall monitoring programme provides data on one-time and daily average pollutant concentrations at the same time. The tests are conducted by the accredited contractor laboratory.

# IN DIALOGUE WITH THE COMMUNITIES

Six main components are monitored: hydrogen sulphide, sulphur dioxide, nitrogen dioxide, carbon oxide, methane, methyl mercaptan. The annual average concentrations of these components, obtained as result of air monitoring on SPZ boundary in 2013, are shown in the table 23:

**Table 23. Annual average concentration of monitored components in 2013 at the boundary of the KOGCF SPZ**

Monitored components	Actual average concentration, mg/m <sup>3</sup>	MPC one-time, mg/m <sup>3</sup>	MPC rates	MPC exceedance, frequency
H <sub>2</sub> S	0.002	0.008	0.25	-
SO <sub>2</sub>	0.011	0.125*	0.09	-
NO <sub>2</sub>	0.026	0.2	0.13	-
CO	0.41	5.0	0.8	-
CH <sub>3</sub> SH (methyl mercaptan)	below detection limit	0.0001	below detection limit	-
CH <sub>4</sub> (methane)	0.982	50**	0.02	-

\* MPC daily average, MPC one-time for sulphur dioxide is not established, so MPC daily average is used to compare concentrations on the border of SPZ.

\*\* Established Tentative safe level; MPCs for methane are not established.

The results of two mutually supporting programmes of air monitoring at the SPZ boundary: periodic sampling and continuous automated measurement, demonstrate similar tendencies and confirm that concentrations of the pollutants are within acceptable levels.

■ **Routine air monitoring** in Aksai town and nine villages, Berezovka, Bestau, Zharsuat, Zhanatalap, Dimitrovo, Karachaganak, Karakemir, Priuralnoye, Uspenovka is carried out through the installed stationary stations, equipped with all necessary instrumentation.

For the reasons of ongoing upgrading works of the premises owned by third parties, the community alarm system in Karakemir and Tungush farms has temporarily

been disconnected and will be connected within 2014. These two farms have no permanent inhabitants, except the two guards who have been provided with KPO emergency contact numbers. KPO intends to build its own constructions to re-install the alarm equipment in 2014.

Monthly reports on the air quality are published in local media and sent to the villages for posting on information boards. The stations are also used for immediate air sampling in case of odour complaints by residents.

7 components monitored in the air of villages adjacent to KOGCF include hydrogen sulphide, sulphur dioxide, nitrogen dioxide, carbon oxide, benzene, toluene, and xylene.



Public hearings on "Landscaping and Tree Planting" Project on the Established SPZ Project

According to the air monitoring results obtained in 2013, the annual average concentrations of the monitored components were as presented in the table 24:

**Table 24. Annual average concentration of monitored components in 2013 in the villages surrounding KOGCF**

Controlled components	Actual concentration (average), mg/m <sup>3</sup>	MPC daily average / MPC one-time, mg/m <sup>3</sup>	MPC rates	MPC daily average exceedance (number of cases), frequency
H <sub>2</sub> S	0.001	0.008*	0.13	-
SO <sub>2</sub>	0.010	0.125	0.08	-
NO <sub>2</sub>	0.025	0.04	0.63	-
CO	0.446	3.0	0.15	-
benzene	0.125	0.3*	0.42	-
toluene	0.018	0.6*	0.03	-
xylene	0.015	0.2*	0.08	-

\* MPC one-time. MPC daily average for hydrogen sulphide is not established, so MPC one-time is used to compare actual concentrations. MPC one-time is also used to benchmark measured concentrations of benzene, toluene, and xylene, as samples for these components are taken and analysed every ten days.

■ **Two mobile environmental monitoring stations** available in KPO are used to ensure additional air quality monitoring activities. In the event of receiving gas odour complaints from residents these stations are immediately mobilized to the site to take air samples.

KPO has accurate and timely data to ensure early detection and prompt response to potential maximum permissible concentration exceedance.

#### Environmental Information Centre

In 2013 KPO finalised its project on creation of the environmental information centre from the KPO EMSs.

The purpose of this project was to set up an online information system to be transferred to the Kazhydromet affiliate in the West Kazakhstan oblast from the two environmental monitoring stations (EMS-013 and EMS-014) installed in Berezovka community. It is expected that this will allow the relevant regional authorities to independently observe the air quality monitoring process in Berezovka community. The National Company Kazhydromet is now in a position to check at any time the data on the monitored pollutants in the air of Berezovka Village. This project was included into the KPO 2011-2013 KPO Environmental Protection Measures Plan and implemented following the recommendations of the RoK Prime Minister-headed Working Group set up in 2010 to review the Berezovka Community issues.



# IN DIALOGUE WITH THE COMMUNITIES

## 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 9 villages where more than 6,000 residents live. The systems control is maintained 24 hours a day by KPO.

On emergency response issues KPO works in close cooperation with local authorities (Akimats). Cooperation Plan for Community Evacuation in the Event of Emergency at the Karachaganak Field was developed jointly by KPO and the Burlin District Akimat.

With support of KPO emergency response and community preparedness team, the local Akims, on an annual basis, prepare and review the plans for communities evacuation in case of an emergency.

As per approved schedule, within 2013 tests of communities' emergency notification stations and equipment were carried out, with the use of sirens. Also, Procedures of Communities' Emergency Notification System and Actions were communicated to local communities Akims, designated members of communities, farmers and local communities. In general, more than 500 people were involved into the awareness raising work.

In accordance with the Regional Emergency Situations Committee's recommendations, the priority in holding the integrated drills, including community evacuation, is given to communities located in close proximity to the Karachaganak Field, with the maximum number of residents and located across-the-border.

To ensure compliance with the RoK Civil Defence legislation the KPO General Director and the company's Civil Defence Head issued an Order on on-line Civil Defence and



*Emergency response exercise in the Zharsuat village*

Emergency Situations training of the KPO staff. The total number of staff who participated in the on-line training amounted to more than 3,500 people.

In August 2013 KPO held an integrated emergency exercise in the Karachaganak Field involving the West Kazakhstan Oblast (WKO) Emergency Situations Department, WKO Internal Affairs Department, the KPO Incident Management Team and Field Emergency Response Department. The event was also attended by Heads of Emergency Situations Departments of Aktobe, Atyrau and South Kazakhstan regions, Astana, representatives of the Emergency Situations Service of Russia and mass media.

The main goals of the joint emergency exercise were to practise joint actions to control and manage an emergency situation, review readiness/preparedness and the interface between emergency response and rescue units as part of KPO Emergency Response and Rescue Service, and test the effectiveness of emergency communications and notification system. Most importantly, however, it was an opportunity to practice skills gained from many years of cooperation.

## **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.

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

Through the Village Councils, the communities 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 the community needs, overall priority, technical feasibility and the associated budget. Following this exercise a set of community development projects is

agreed and implemented in the eight villages surrounding the Field. Over the years, we aim at maintaining the balance of support across the different villages.

**The KPO initiatives implemented in 2013 to support the local communities' development in the following areas:**

### **Community Health**

In 2013 KPO successfully implemented its long-term community development programmes. Thus, 247 pensioners from the five rural districts (Beryozovskiy, Uspenovskiy, Zharsuatskiy, Priuralnyi and Pugachyovskiy) had a recreation in the Akzhaik sanatorium located in the WKO, as part of the KPO's health improvement programme for elderly people. Besides, KPO implemented the Summer Camps Programme for 160 children in the age groups of 7 to 14 years old from the above rural districts at the Talap Summer Camp located in Uralsk, the WKO.

In 2013, as part of its monitoring plan, KPO conducted a community survey involving 350 rural elderly people and children in order to explore the quality of services provided in the above mentioned organisations, including the work of the KPO Community Relations Department. According to the survey, all respondents highly evaluated the quality of medical treatment, accommodation conditions, meals and entertainment both at "Akzhaik" and "Talap" and the work of the KPO Community Relations Department.

In 2013 KPO donated 5 Ambulances to Clinics of the five neighbouring rural districts adjacent to the Karachaganak Field. The purpose of this initiative was to improve the quality of medical services for the local communities of Berezovski, Uspenovski, Zharsuatski, Priuralnoye and Kzytalski rural districts. All vehicles are equipped with basic medical aid items.

It has become a tradition in KPO to pay tribute of respect to the war veterans and their widows on Victory Day. In 2013 the KPO Community Relations Department employees visited 21 war veterans from the eight villages adjacent to the Karachaganak Field and distributed food baskets.

# IN DIALOGUE WITH THE COMMUNITIES

## Education

To ensure sustainability of our local communities development programmes we try to focus on promotion of education and development of local youth's skills and knowledge. We are gradually shifting from the one-off charity support to a long-term investment into human capital. This approach helps the company address its strategic goals and promote economic development and growth of local communities.

### Mobile School of Arts "Levsha"

In 2013 KPO continued its Mobile school of Arts Programme on provision of extra-curricular classes on applied arts and folk souvenirs with the aim of further professional development. About 200 schoolchildren of Aksai, the neighbouring villages and Burlin Village are learning arts, wood-carving, engraving, modelling, embroidery, braiding and making folk souvenirs.

### Community Scholarship Programme

In 2013, KPO continued to support its Pilot Community Scholarship Project launched in 2010 in cooperation with the Burlin District Education Department to ensure the availability of professionals in the area of education, healthcare and agriculture in the rural districts. Children from low-income families in the villages are funded to have specific education in Colleges or Universities under the commitment for them to come back to their rural district and serve for a certain number of years. This condition was dictated by the need in qualified staff in communities. 17 students have been offered grants and scholarships in 2013 and enrolled in the West Kazakhstan Universities and Colleges.

### English Language Programme

In 2013 KPO continued its English Language programme for rural schoolchildren and Aksai schools. This programme has been supported by Burlin District Education Department. The aim of this programme is to improve the English language knowledge for the schoolchildren and provide a better access to further education and employment.

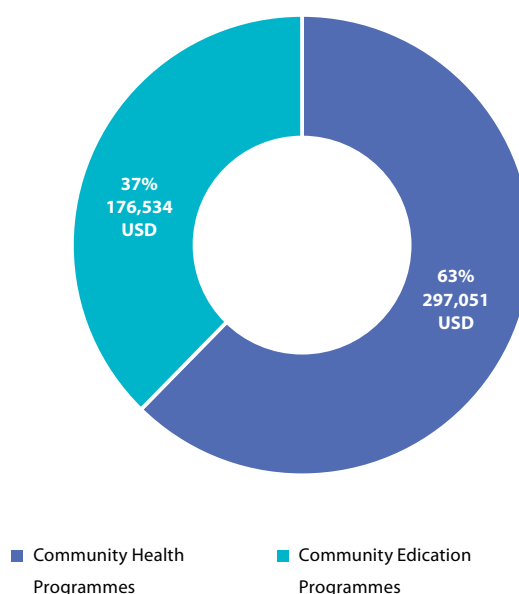
300 schoolchildren from senior grades of the six schools of Aksai and 5 neighbouring Villages (Berezovka, Uspenovka, Zhanatalap, Zharsuat and Priuralnoye) are attending the classes and 11 qualified teaching staff involved in the Programme.

## Gifts

Each year KPO provides funds for purchase of gifts for the Knowledge Day and the New Year. In 2013 124 schoolchildren from disadvantaged families in the five neighbouring communities received from KPO backpacks filled with stationery.

Sweet gifts were given for the New Year to 1230 children from 0 to 14 years living in Uspenovka, Berezovka, Zharsuat, Zhanatalap, Priuralnoye, Karachaganak, Dimitrovo and Bestau communities.

**Graph 27. 2013 KPO Community Development Programmes**







*Village school children in the Talap summer camp sponsored by KPO*



*KPO sponsored English language courses for Aksai school children*



*KPO greets widows of veterans of World War II*



*Computer donated for the school of the Beryozovka Village*



# DEVELOPING THE REGIONAL ECONOMY

Development of the Karachaganak Field implies more than just generating income and taxes on oil and gas production. This is also an establishing of long-term, strong partnerships for economic development.

## SUPPLY CHAIN

Working with local suppliers and contractors constitutes an essential part of the economic development of the region and country as a whole.

KPO requires many contractors for key activities in the Karachaganak oil & gas operations, including construction, drilling, transportation and maintenance.

We engage contractors to perform a broad range of works, services and to provide goods, such as construction, mechanical and electrical works, casing and tubing services, provision of drilling rigs, wellhead & safety cutoff device (X-mas tree) installation and maintenance services, electric line logging & perforating, wells testing and clean-up services, provision of production chemicals, completion equipment and services, engineering services, shutdown support services.

The overall supply chain is built to ensure:

- All activities are carried out in compliance with the professional ethics and the Code of Conduct;
- Objectiveness, equity, transparency of the processes and fairness of the supply chain activities;
- Contracting and procurement is performed in strict adherence to the Final Production Sharing Agreement and other procedures, governing the processes and expenditures of the Company;
- Compliance to RK legislation and international laws applicable in suppliers' countries of origin.

Since the Karachaganak Project development up to end 2013, 6,748 potential suppliers of goods, works and services have been registered in KPO Vendor database. In 2013, KPO has continued with assessment and registration of new suppliers, including the re-assessment of existing suppliers.

Any potential supplier willing to have a business with KPO is to demonstrate the following key competences and ability to comply with the necessary requirements:

- Professional competence and experience;
- Corporate HSE competence;
- Financial Stability;
- Ethical Due Diligence compliance.

At the stage of registration the potential supplier is asked to complete the Vendor assessment questionnaire, which addresses the questions related to Health, Safety and Environmental protection along with the general questions regarding the organizational and due diligence questions.

KPO vendor database is the fundamental information source used during the market research in order to identify potential competitive suppliers of goods, works and services from the international and local markets.

Moreover, KPO maintains the process of the assessment of the supplies quality, performance of the works and services. Within the scope of such assessment KPO arranges the meetings with the vendors and contractors in order to clarify the inquired non-compliances and to present the guidance to rectify the issues.

Within 2013 KPO has placed 1,642 contracts and amendments to the contracts for the value worth over USD 1 billion. These contracts or contract amendments have been awarded to more than 630 vendors. The placement of contracts includes ethical due diligence, as described in Corporate Governance chapter on p. 32-33.

KPO has assessed 369 companies during the year, which included new and existing companies on the KPO contractors' database which required a reassessment. A total of 277 new companies were added to the database.

## LOCAL CONTENT REPORTING

Since the beginning of the Karachaganak field development KPO has been actively working towards the local content enhancement aiming at reduction of import and increase of locally produced goods and services in the range of products



WKO entrepreneurs visited Karachaganak

and services used by international investors in running their business in Kazakhstan.

According to the requirements of the Kazakhstan legislation on local content KPO makes calculation of local content in its procurement system using the same methodology since 2010. Local content reporting is submitted to the RoK Ministry of oil and gas on a quarterly basis.

In order to demonstrate the transparency of procurement, KPO publishes on its website an annual, medium-term and long-term plans for the procurement of goods, works and services. This information helps local companies in developing their own strategies to meet the highest needs and requirements of KPO as the major employer in the region.

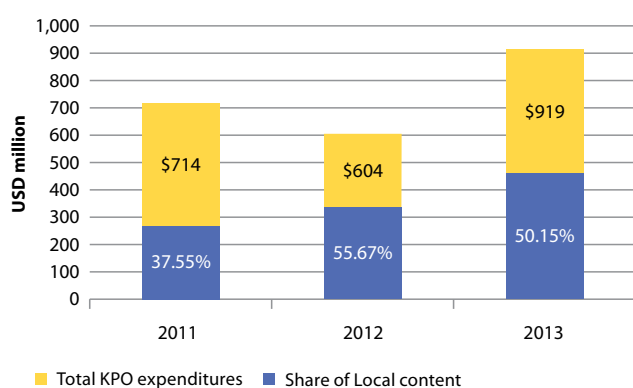
### SUPPORTING KAZAKHSTANI BUSINESS

KPO is one of the first companies in Kazakhstan which has successfully introduced the Local Content Development Programme. Since the time of implementation of this programme in 2001, some 3,000 local suppliers have been registered in its database.

In 2013, the Kazakh Content in the Karachaganak project made up to 50,15 % (equivalent to USD 461 million as shown below).

Cost analysis of KPO for 2011-2013 shows the share of local content in KPO activities including goods, works and services.

**Graph 28. Share of Local content out of total KPO expenditures in USD million**



KPO proactively assisted and supported the implementation of pilot projects aimed at localization of production with the application of latest technologies to raise productivity and improve the quality of the manufactured goods and services.

These projects primarily stimulate cooperation between foreign and domestic producers, an increase in domestic investment, which in turn stimulates the creation of new jobs and has an impact on the socio-economic development of the region. It is important for KPO to maintain continuous development of local companies, building their capacity and competencies to ensure their conformity to international Oil & Gas industry standards.

One of such initiatives is the Project on localisation of spare parts production 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 account the results of KPO's needs review for goods and services and the national market research. At the initial stages of the project the capability and potential of the local manufacturers for further development have been evaluated. The objective is to produce a strategic plan for development of locally needed commodities manufacturing through phased execution.

Based on the results of earlier phases of the project and recommendations, in 2013 a decision to implement the Project Phase V was taken, involving:

- The signing of partnership agreements and / or cooperative agreements;
- Creation of joint ventures between the national and international manufacturers and the signing of framework agreements to support the development of production projects on a competitive basis.

On completion of the Phase V evaluation the main emphasis was placed on the recommendations rationale for the development of oil and gas engineering production to increase local content in the oil and gas sector in WKO.

Based on the recommendation of the Expert Group a Consortium "Mashzavod" was established with involvement

# DEVELOPING THE REGIONAL ECONOMY

of the eight WKO industrial enterprises and Aksai Industrial Park comprising of: Tematech, Aluminium Technologies, Petroweld, Sferova, and KTS companies.

The aim of the industrial Consortium's establishment is a participation of the engineering plants in production of goods and services for subsoil users. The coordination and interests representation of the participants in tenders has been assigned to "Zenittekhservice" LLP. Creation of the Consortium on the basis of the WKO enterprises provides the opportunity to sign partnership agreements with other foreign companies, to cooperate with international companies, and to participate in the delivery of goods, works and services for subsoil users.

The success of the "Mashzavod" Consortium is mainly based on such factors as established partnerships, innovative technology, human capital assets and the opportunity to localize the production of spare parts for the oil and gas sector.

On the basis of comparison of the list of goods, equipment and spare parts submitted for KPO in a period from 2002 up to 2010 with a list of commodities and equipment produced by the WKO engineering enterprises, conclusions on the suitability to manufacture certain types of equipment and spare parts were made. Recommendations for the establishment of joint ventures between Kazakhstani and international enterprises for the production of spare parts for the oil and gas industry have been prepared. The algorithm of search for foreign partners was defined.

Establishing cooperation between the Kazakhstani enterprises and the original foreign producers offers the possibility to create joint ventures on spare parts and equipment output for the oil and gas industry in order to increase the local content and localization of production. Selection of the foreign partners and the forms of cooperation is defined by the stakeholders – both Kazakhstani and foreign companies.

## Interaction with oil and gas companies in Kazakhstan

Efficient cooperation with the domestic market stays actual to all Kazakhstani oil and gas enterprises. The large enterprises of the industry cooperate in various areas to ensure the

highest possible level of local content. One of the most successful formats of such cooperation is holding joint forums with domestic enterprises to further develop the market for goods and services required in the oil and gas sector, as well as attracting investments and transfer of "know-how".

In 2012, Aktau declaration on joint actions was signed between the National Company KazMunaiGas and major oil and gas operators – Tengizchevroil, North Caspian Operating Company and KPO. The Declaration is an expression of support for conducted works by major oil and gas operators on combining separate operators, investors and government agencies programs for the development of domestic production in a single initiative.

A special working group has been created to monitor activities on the base of defined criteria for each initiative in terms of local content development. Initial requirements and implementation plan have been developed for each initiative of local content development project via short consultation process with each operator/investment company, included in the working group.

The working group include sections on the following questions:

- **Personnel training and skills development;**
- **The Register of Kazakhstan industrial potential** as a reference source for determining the current and future potential in the Oil and Gas industry and non-oil and gas economic sector;
- **The domestic investment program** to improve business environment and identify opportunities to accelerate the development and expansion of industrial and logistics base in Kazakhstan;
- **Harmonisation of standards, specifications, tendering procedures, rules and regulations** and the application of best practices (Code of industry practice of supply chain);
- **Corporate development**, which will stimulate the promotion, growth and new expansion of local companies, including access to management expertise, knowledge and funding, and will also support access to domestic and foreign markets.



Conference with KPO contractors on issues of compliance with contractual obligations and management responsibility

■ **Research and development** works with purpose of implementation of specific programs for technology development in the Republic of Kazakhstan for the creation of new business opportunities for local and domestic markets.

In March 2013, a working meeting between the KPO management and representatives of the Association of WKO Entrepreneurs and industrial enterprises, aiming to familiarize the latter with the operational facilities of the company and the update on development of the Karachaganak Field. The delegation was provided with information on the results of the company operations and the implementation of the local content development program.

In September 2013, KPO held a conference on the Implementation of contractual obligations and leadership responsibility for the contractors. The conference was attended by representatives of more than 40 Kazakhstani contractor companies. The conference was organized to help contractors to improve the existing quality management system while performing contracts for KPO projects.

#### ENERGY SUPPLIES TO WESTERN KAZAKHSTAN REGION

Due to the fact that gas supply to the residents of Burlin district was transferred to the pipeline of Karachaganak – Uralsk, no fuel gas was supplied by KPO in 2013.

In addition to the gas supply to residents in previous periods, KPO also supplies electricity to WKO residents. In accordance with the FPSA terms and conditions it was decided that energy exported to the locals shall initially amount to 20 MW. Subsequently, after further discussions between the Joint Operating Committee (JOC) and the WKO Akimat in 2005, KPO built and commissioned a fourth generator at KPC GTTP that has made possible a gradual increase in electricity exports to regional networks in the coming years to 45-48 MW.

KPO currently produces and exports electricity to the two power supply companies for subsequent delivery to the WKO consumers, providing 4.0 MW of power to “Aksaienergo” LLP and up to 41 MW to “Batys Energoresursy” LLP.

In view of the planned KPO facilities shutdown, the production level of power supply for the region in 2013 was turned lower than in 2012. In addition, a significant impact on reducing the volume of exports had the adverse weather conditions in January and February 2013: ice incrustations on overhead power line wires of 110 kV that caused numerous lines faults and power cuts for a long period. As a result of that, KPO had to reduce exports in January-February 2013.

At a later stage, in order to meet the addresses of the regional authorities and power supply companies to prevent the increase of tariffs for electricity in WKO, KPO had found the way of simultaneous operation of the four generators to compensate the forced, by virtue of nature, undersupply of electricity from the KPC GTTP to the network of West Kazakhstan Regional Electricity Company. In line with the standard procedure, one generator was in a stand-by mode before.

KPO electricity export to a regional network amounts from 30 to 40 % depending on a season, which is a significant contribution to the economy of the region due to the low KPO electricity rates. In 2013, KPO produced in total 325.9 GWh of electricity for export to the WKO network, including 34.4 GWh for “Aksaienergo” LLP and 291.5 GWh for “Batys Energoresursy” LLP. In 2013, the supply of fuel gas to generate electricity at GTTP KPC for WKO consumers totalled 98.7 million m<sup>3</sup>.

**Table 25. Supply of fuel gas by KPO in 2013**

	2011	2012	2013
KPO fuel gas use for WKO supply, mscm	130.9	130.4	98.7
including:			
■ direct sales to “KaztransgasAimak” (KTGA)	12.6	19.8	0.0
■ use for power generation for WKO	118.3	110.6	98.7
Electricity provided to WKO, GWh	378.2	350.4	325.9



# DEVELOPING THE REGIONAL ECONOMY

## SUPPORTING SOCIAL INFRASTRUCTURE

Under the terms of Annex 5 to the FPSA, from 1998 until 2009 KPO Company provided USD 10 million per annum to fund social infrastructure projects agreed with the West Kazakhstan Oblast Akimat in accordance with their list of social development priorities. These projects are implemented throughout the WKO, and include schools, nurseries, hospitals and cultural and sporting facilities.

In 2009, the Joint Operating Committee resolved to double the amount of annual funding of social and infrastructure projects to USD 20 million.

In accordance with provisions of Annex 5 to the FPSA, if the project is not completed by the end of the year, the unspent budget is carried over onto the next calendar year. This explains the larger amounts shown in the tables below.

KPO receives the list of projects approved by the WKO Akimat and the JOC, and from there on the Venture

overlooks the design, procurement and project management until the turn-key project is handed over to the Republic of Kazakhstan. All social projects are contracted entirely to Kazakhstani companies.

In November 2013, a meeting was held in WKO Akimat, where the implementation of the ongoing social projects, the status of implementation of project activities on the planned projects and the readiness of project documentation for delivery to the Customer were discussed.

In 2012 an internal consultative body called the KPO Social Projects Committee was established comprising members of the KPO national staff residing in Aksai. The aim of this Committee is to ensure the transparency and participatory decision-making during the process of selection of social projects identified for the town of Aksai and the Burlin District.



*At the Opening ceremony of the school in the Saikuduk village*



Kindergarten in Uralsk

**Table 26. Social and infrastructure projects implemented in 2013**

Social projects in Uralsk		
Title / Status	Project Description	Budget (Million USD)
<b>Completion of construction of the Tennis Complex</b> <i>Ongoing</i>	The tennis complex will consist of four indoor and four outdoor tennis courts including stands with seats for 300 spectators. Project progress is 26%.	10.9
<b>Kindergarten for 350 children</b> <i>Completed</i>	The kindergarten is a two-storey building that will accommodate 350 children (16 groups) including 16 playgrounds with shelters and game equipment, an area for sports and a garden. The building is fully equipped and furnished on a turn-key basis.	3.7
<b>Construction and upgrading of roads (project 2012)</b> <i>Completed</i>	The project aims to improve the city infrastructure, the condition and quality of roads, communication between the micro-districts.	1.3
<b>Repair of motor roads</b> <i>Completed</i>	Repair of the road pavement, improvement of the condition of the city roads, provision of communication between the micro-districts.	1.9
<b>Construction of Arts Centre after Kadyr Mirza-Ali</b> <i>Ongoing</i>	The Arts Centre will host the creative literary meetings and events: concerts, performances of masters of arts, exhibitions of works of art. Also here will be provided library of the works of poets and writers of the region. Project progress is 3%.	5.5
<b>Construction of the modular boiler in Samal micro-district</b> <i>Completed</i>	The Modular boiler is aimed at provision of the heating supply to the school for 1200 pupils and kindergarten for 350 children.	0.4
<b>Total</b>		<b>23.7</b>
Social Projects in the WKO regions		
Title / Status	Project Description	Budget (Million USD)
<b>School in Saikuduk village, Akzhaik district</b> <i>Completed</i>	The school is aimed to accommodate 198 children from the Saikuduk village of the Akzhaik district. It has classrooms, a gym, a conference hall, a canteen and a library. The school is fully furnished and equipped on a turn-key basis.	2.9
<b>Construction of a music school in Chingirlau village, Chingirlau district</b> <i>Completed</i>	Music school is designed to educate school-age children to play musical instruments, choral singing, singing and dancing. Training is provided on an individual program in separate classes depending on the specialization: class dombra, button accordion, kobyz, dancing hall, choral singing class.	0.43
<b>Construction of Cultural Centre for 200 visitors in Kaldygaity (Sulykol village) of Karatobe district</b> <i>Ongoing</i>	The complex is designed for cultural and festive events in Kaldygaity village of Karatobe district. Culture Centre will be fully equipped with everything required. Project progress is 31%.	2.2
<b>Total</b>		<b>5.53</b>

# GRI CONTENT INDEX

Prepared 'in accordance' with the Global Reporting Initiative's (GRI) Guidelines 4, KPO 2013 Sustainability Report meets the requirements of the Core option. The table below demonstrates our disclosures of indicators against the Core option.

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	GRI Indicator description	Page/Response	External Assurance
STRATEGY AND ANALYSIS			
G4-1	Statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	Letter from General Director (pp.6-7), Performance and Targets (pp.8-15)	✓
G4-2	Description of key impacts, risks, and opportunities	Corporate Governance (p.28), Letter from General Director (pp.6-7), Our performance and Targets (pp.8-15)	✓
ORGANIZATIONAL PROFILE			
G4-3	Name of the organization	Report Profile (p.5)	✓
G4-4	Primary brands, products, and services	Our Products and Export Routes (p.16), 2013 Operations (p.18)	✓
G4-5	Location of the organization's headquarters	Back cover Operations and Projects (p.16-17)	✓
G4-6	Number of countries where the organization operates	Operations and Projects (p.16-17)	✓
	Names of countries where either the organization has significant Operations and Projects or that are specifically relevant to the sustainability topics covered in the report	Operations and Projects (p.16-17)	✓
G4-7	Nature of ownership and legal form	Corporate Governance (p. 28-29)	✓
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	Our Products and Export Routes (pp.16-18)	✓
G4-9	Scale of the organization, including: Total number of employees	People are Our Asset (p.64)	✓
	Total number of Operations and Projects	Projects and development activities (pp.20-21)	✓
	Net sales (for private sector organizations) or net revenues (for public sector organizations)	Not reported due to FPSA confidentiality restrictions	✓
	Total capitalization broken down in terms of debt and equity (for private sector organizations); and	N/A	✓
	Quantity of products or services provided	2013 Operations (p.18)	✓

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	GRI Indicator description	Page/Response	External Assurance
G4-10	Total number of employees by employment contract and gender	People are Our Asset (p.64)	✓
	Total number of permanent employees by employment type and gender	People are Our Asset (p.64)	✓
	Total workforce by employees and supervised workers and by gender	People are Our Asset (p.64)	✓
	Total workforce by region and gender	People are Our Asset (pp.64-65)	✓
	Whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors	No	✓
	Any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries)	N/A	✓
G4-11	Percentage of total employees covered by collective bargaining agreements	Employee Relations (p.70)	✓
G4-12	Description of the organization's supply chain.	Supply Chain (p.84)	✓
G4-13	Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.	No significant changes	✓
G4-14	Explanation of whether and how the precautionary approach or principle is addressed by the organization	Asset Integrity Management (pp.21-22)	✓
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	Strategic Approach in Community Engagement (p.72)	✓



# GRI CONTENT INDEX

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	GRI Indicator description	Page/Response	External Assurance
G4-16	Memberships in associations (such as industry associations) and national or international advocacy organizations in which the organization: * Holds a position on the governance body; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; * Views membership as strategic	Membership in Associations (p.26)	✓
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-17	List all entities included in the organization's consolidated financial statements or equivalent documents. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	This Report covers the Operations and Projects of the KPO B.V. Branch in Kazakhstan	✓
G4-18	Process for defining the report content and the Aspect Boundaries	Report Profile (p.5)	✓
	Explanation of how the organization has implemented the Reporting Principles for Defining Report Content	Report Profile (p.5)	✓
G4-19	List all the material Aspects identified in the process for defining report content.	Materiality Issues (p.27)	✓
G4-20	For each material Aspect, report the Aspect Boundary within the organization, as follows: Report whether the Aspect is material within the organization.	Materiality Aspects (p.5), Letter from General Director (pp.6-7), Stakeholder Engagement (pp.24-26)	✓
G4-21	For each material Aspect, report the Aspect Boundary outside the organization, as follows: Report whether the Aspect is material outside of the organization. If the Aspect is material outside of the organization, identify the entities, groups of entities or elements for which the Aspect is material.	Materiality Issues (p.27)	✓
	Description of the geographical location where the Aspect is material for the entities identified	Operations and Projects (p.16)	✓

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	GRI Indicator description	Page/Response	External Assurance
G4-22	Explanation of the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	None	✓
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	No significant changes	✓
STAKEHOLDER ENGAGEMENT			
G4-24	List of stakeholder groups engaged by the organization	Stakeholder Engagement (pp.24-26)	✓
G4-25	Basis for identification and selection of stakeholders with whom to engage	Stakeholder Engagement (pp.24-26)	✓
G4-26	Approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	Stakeholder Engagement (pp.24-26). Our stakeholder groups listed in detail in the Report 2012 on p.26.	✓
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	Stakeholder Engagement (pp. 24-26), In Dialogue with the Communities on (pp.72-83)	✓
	Report the stakeholder groups that raised each of the key topics and concerns	Stakeholder Engagement (pp.24-26)	✓
REPORT PROFILE			
G4-28	Reporting period (such as fiscal or calendar year) for information provided	Report Profile (p.5)	✓
G4-29	Date of most recent previous report (if any)	Report Profile (p.5)	✓
G4-30	Reporting cycle (such as annual, biennial)	Report Profile (p.5)	✓
G4-31	Contact point for questions regarding the report or its contents	Back cover	✓

# GRI CONTENT INDEX

GENERAL STANDARD DISCLOSURES			
General Standard Disclosures	GRI Indicator description	Page/Response	External Assurance
G4-32	Report the 'in accordance' option the organization has chosen	Global Reporting Initiative (p.5)	✓
	Report the GRI Content Index for the chosen option	GRI Content Index, (p. 90)	✓
	Report the reference to the External Assurance Report, if the report has been externally assured	Assurance Statement, (p. 102-103)	✓
G4-33	Organization's policy and current practice with regard to seeking external assurance for the report.	Independent Assurance, (p.5)	✓
GOVERNANCE			
G4-34	Governance structure of the organization, including committees of the highest governance body.  Identify any committees responsible for decision-making on economic, environmental and social impacts	Organization and Governance Structure (pp.28-29)	✓
ETHICS AND INTEGRITY			
G4-56	Organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.	Compliance Framework (pp.30-31)	✓
G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines.	Hotline and other compliance measures (p.32)	✓
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	Hotline and other compliance measures (p.32), Employee Relations (p.70)	✓

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	GRI Indicator description	References and comments	Omissions	External Assurance
ECONOMIC				
<i>Economic performance</i>	DMA	Aspect covers KPO; Supporting Social Infrastructure (p.88)		✓
G4-EC4	Financial assistance received from government	No assistance received		✓
<i>Market presence</i>	DMA	Aspect covers KPO; Development of the national personnel (pp.68-69)		✓
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	Development of the national personnel (pp.68-69)		✓
<i>Indirect Economic Impacts</i>	DMA	Aspect covers KPO; Supporting Social Infrastructure (pp.88-89)		✓
G4-EC7	Development and impact of infrastructure investments and services supported	Social and Infrastructure Projects implemented in 2013 (p.89)		✓
G4-EC8	Significant indirect economic impacts, including the extent of impacts	Supporting Kazakhstani Business (pp.85-87)		✓
<i>Procurement Practices</i>	DMA	Aspect covers KPO; Local Content reporting (pp.84-85)		✓
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	Supporting Kazakhstani Business, Share of Local Content (p.85)		✓
ENVIRONMENTAL PERFORMANCE				
<i>Energy</i>	DMA	Aspect covers KPO; Energy Saving Programme (p.54)		✓
G4-EN3	Energy consumption within the organization	Electric power consumption, (p.54)		✓
<i>Water</i>	DMA	Aspect covers KPO; Implementation of the Environmental Protective Measures Plan for 2013 (pp.46-47)		✓
G4-EN8	Total water withdrawal by source	Water Resources, (p.55)		✓



# GRI CONTENT INDEX

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	GRI Indicator description	References and comments	Omissions	External Assurance
G4-EN9	Water sources significantly affected by withdrawal of water	Water withdrawal does not significantly affects the water sources		✓
G4-EN10	Percentage and total volume of water recycled and reused	Water Resources (pp.55-56). Approximately 13% of the water taken from surface sources is reused.		✓
<i>Biodiversity</i>	DMA	Aspect covers KPO; Implementation of Environmental Protective Measures Plan for 2013 (p.46), Biodiversity (p.62)		✓
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity (p.62)		✓
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	No significant impacts, see Biodiversity (pp.62-63)		✓
G4-EN13	Habitats protected or restored Report the size and location of all habitat protected areas or restored areas, and whether the success of the restoration measure was or is approved by independent external professionals.	Gryphone Area Remediation (p.62)		✓
G4-EN14	Total number of IUCN red list species and national conservation list species with habitats in areas affected by Operations and Projects, by level of extinction risk	Biodiversity, (pp.62-63)		✓
<i>Emissions</i>	DMA	Aspect covers KPO; Implementation of the Environmental Protective Measures Plan for 2013 (p.46), Emissions to air (pp.47-48)		✓
G4-EN15	Direct greenhouse gas (GHG) emissions	Direct greenhouse gas emissions (pp.50-51)		✓

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	GRI Indicator description	References and comments	Omissions	External Assurance
G4-EN16	Energy indirect greenhouse gas (GHG) emissions	Indirect greenhouse gas emissions (p.52)		✓
G4-EN18	Specific Greenhouse gas (GHG) emissions	Specific greenhouse gas emissions (p.52)		✓
G4-EN19	Reduction of greenhouse gas (GHG) emissions	GHG emission reduction (p.53)		✓
G4-EN21	NOx, SOx, and other significant air emissions	Emissions to Air, (p.48)		✓
<i>Effluents &amp; Waste</i>	DMA	Aspect covers KPO; Implementation of the Environmental Protective Measures Plan for 2013 (p.46)		✓
G4-EN22	Total water discharge by quality and destination	Discharges of treated wastewater, (p.58)		✓
G4-EN23	Total weight of waste by type and disposal method	Waste Management, (p.60-61)		✓
G4-EN24	Total number and volume of significant spills	Spills (p.62)		✓
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the basel convention annex I,II,III, and percentage of transported waste shipped internationally	KPO does not have any imported or exported wastes		✓
<i>Overall</i>	DMA	Aspect covers KPO; Implementation of the Environmental Protective Measures Plan for 2013 (p.46), HSE Management system (p.34)		✓
G4-EN31	Total environmental protection expenditures and investments by type	Implementation of Environmental Protective Measures Plan for 2013 (pp.46-47)		✓
<i>Environmental grievance mechanisms</i>	DMA	Aspect covers KPO; Handling complaints and suggestions (p.74)		✓

# GRI CONTENT INDEX

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	GRI Indicator description	References and comments	Omissions	External Assurance
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	Handling complaints and suggestions (p.74)		✓
LABOR PRACTICES AND DECENT WORK				
<i>Employment</i>	DMA	Aspect covers KPO; Employee relations (p.70)		✓
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	People are Our Asset, (pp. 65-66)		✓
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	Compensations and Benefits (pp. 70-71)		✓
<i>Labor / Management relations</i>	DMA	Aspect covers KPO; Employee Relations (p.70)		✓
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	Employee Relations (p.70)		✓
<i>Occupational Health and Safety</i>	DMA	Aspect covers KPO and its contractors; Management systems (p.29), HSE Management system (p.34), 2013 HSE Plan (p.40)		✓
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	Safety performance in 2013 (p.38)		✓
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	Safety Performance in 2013 (pp.34-37)	Data are not provided by gender as it is considered not viable	✓

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	GRI Indicator description	References and comments	Omissions	External Assurance
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation.	Occupational Health (pp.43-44)		✓
G4-LA8	Health and safety topics covered in formal agreements with trade unions	Health, Safety and Security (p.37)		✓
<i>Training and Education</i>	DMA	Aspect covers KPO; Training and Development (pp.66-68), Compensations and Benefits (pp.70-71), KPO scholarship programme and partnership with universities (p.71)		✓
G4-LA9	Average hours of training per year per employee by gender, and by employee category	Training and Development, (p.67)	Data are not provided by gender as it is considered not viable	✓
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	KPO Scholarship Programme and Partnership with Universities (p.71)		✓
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	Compensations and Benefits (p.70)		✓
<i>Diversity and Equal Opportunity</i>	DMA	Aspect covers KPO; Development of the national personnel (pp.68-69)		✓
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	Development of the national personnel, (p.69)		✓
<i>Diversity and Equal Remuneration</i>	DMA	Aspect covers KPO; Code of Conduct (p.30-31), Employee Relations (p.70)		✓



# GRI CONTENT INDEX

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	GRI Indicator description	References and comments	Omissions	External Assurance
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	Basic salaries are established for employee categories regardless of gender, and so basic salaries for women and men are equal.		✓
<i>Supplier Assessment for Labor Practices</i>	DMA	Aspect covers KPO and its contractors; Supply chain (p.84)		✓
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	Anticorruption due diligence process (pp. 32-33), Supply chain (p.84)		✓
<i>Labor Practices Grievance Mechanisms</i>	DMA	Aspect covers KPO; Corporate governance (pp.31-33), Employee relations (p.70)		✓
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	Employee Relations (p.70), Hotline and other compliance measures (p.32)		✓
HUMAN RIGHTS				
<i>Investment</i>	DMA	Aspect covers KPO; Code of Conduct/Training (pp.31-32)		✓
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	Code of Conduct/Training (p.31)		✓
<i>Freedom of Association and Collective bargaining</i>	DMA	Aspect covers KPO; Employee Relations (p.70)		✓
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	Employee Relations (p.70)		✓

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	GRI Indicator description	References and comments	Omissions	External Assurance
<i>Forced or Compulsory Labor</i>	DMA	Aspect covers KPO; Code of Conduct (p.31), Hotline and other compliance measures (p.32), Employee Relations (p.70)		✓
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	We do not foresee any significant risk for incidents of forced or compulsory labor for KPO or contractors.		✓
<i>Human Rights Grievance Mechanisms</i>	DMA	Aspect covers KPO; Hotline and other compliance measures (p.32), Employee Relations (p.70)		✓
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	Employee Relations (p.70)		✓
SOCIAL PERFORMANCE				
<i>Anti-corruption</i>	DMA	Aspect covers KPO and its contractors; Code of Conduct / Training (p. 31)		✓
G4-SO4	Communication and training on anti-corruption policies and procedures	Code of Conduct/Training (p.31)		✓
<i>Grievance Mechanisms for Impacts on Society</i>	DMA	Aspect covers KPO; Handling complaints and suggestions (p.74)		✓
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	Handling complaints and suggestions (p.74)		✓
<i>Public policy</i>	DMA	Aspect covers KPO; Strategic Approach in Community Engagement (p.72)		✓
G4-SO6	Total value of political contributions by country and recipient/beneficiary	No contributions		✓

# ASSURANCE STATEMENT



## **Independent Assurance Report on the Karachaganak Sustainability Report 2013 of Karachaganak Petroleum Operating B.V.**

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

### **Identification and description of the subject matter**

At the request of Karachaganak Petroleum Operating B.V. (hereinafter 'KPO') we have performed a limited level assurance on the qualitative and quantitative information disclosed in the 'Karachaganak Sustainability Report 2013: The Enduring Benefits of Karachaganak' (hereinafter 'the Report').

### **Identification of the criteria**

The criteria of our engagement were the Global Reporting Initiative's Sustainability Reporting Guidelines version G4 (hereinafter 'the GRI G4 Guidelines'), sustainability reporting principles of KPO which are identical to the reporting principles contained in the GRI G4 Guidelines as set out in the section 'Report profile' on page 5 of the Report, 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.

### **Management's responsibilities**

The management of KPO is responsible for implementation of sustainability-related policies and procedures in accordance with the KPO Sustainable Development Charter, and the preparation of the Report and the information therein in compliance with the GRI G4 Guidelines. 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.

### **Our responsibilities**

Our responsibilities are to independently express a conclusion that:

- Sustainability performance summary information and data included in the Report, in all material aspects, provide reliable and sufficient representation of sustainability policies, activities, events and performance of KPO in 2013,

- 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, charity and social investments are in place and are compliant with relevant principles of the GRI G4 Guidelines,
- Sustainability related policies and procedures corresponding to the KPO Sustainable Development Charter, and described in the Report, exist,
- The Report is prepared 'in accordance' with the GRI G4 Guidelines using the Core option.

### **Summary of work performed**

Our engagement was conducted in accordance with International Standard on Assurance Engagements (ISAE) 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by IFAC, and accordingly included the following procedures:

- 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 preparing 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 2013,
- 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, charity expenditure, and social investments, as well as reporting processes to assess whether these data are collected, prepared, collated and reported appropriately,

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- ▶ Visit to KPO's main offices to conduct interviews, and drilling rig 258 to observe health, safety and environmental aspects of well operations,
- ▶ Visit to Priuralnyi village to observe stakeholder meeting organized to present KPO sustainability performance for 2013, and discuss KPO charitable activities planned for 2014 in Priuralnoye community with the community members,
- ▶ 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 G4 Guidelines used by KPO, and
- ▶ Assessment of compliance of information and data disclosures in the Report with the requirements of the Core option of reporting 'in accordance' with the GRI G4 Guidelines.

We believe that our procedures provide a basis on which we can provide limited assurance. Our evidence gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement.

#### Conclusions

Based on our work described in this report, 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 2013 in accordance with the GRI G4 Guidelines 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, charity, and social investments are not in place and not compliant with relevant principles of the GRI G4 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 prepared 'in accordance' with the GRI G4 Guidelines using the Core option.

*Ernst & Young Advisory LLP*

Almaty

19.05.2014



# GLOSSARY

BAP	Biodiversity Action Plan
bcm	billion cubic meters
BGK	BG Kazakhstan
BFMOC	Brownfield Management of Change
BOE	Barrels of oil equivalent
CH <sub>4</sub>	methane
CMS	Competence Management System
CMT	Crisis Management Team
CnHm	Methane hydrocarbons
CO <sub>2</sub> e	Carbon dioxide equivalent
CO	Carbon oxide
ConCom	Contractors' Committee
Contractor/Contracting/Parent Company	Refers to BG, eni, Lukoil, Chevron and KazMunaiGaz NC
CPC	Caspian Pipeline Consortium
DMA	Disclosure of Management Approach
EDD	Ethical Due Diligence
EIA	Environmental Impact Assessment
EMS	Environmental Monitoring Station
EOPS	Early Oil Production Satellite
EPMP	Environmental Protective Measures Plan
ER	Emergency Response
FAB	Field Administration Building
FDP	Field Development Program
FEED	Front End Engineering Design
FPSA	Final Production Sharing Agreement
GHG	Greenhouse Gas
GOR	Gas Oil Ratio
GRI	Global Reporting Initiative
GTPP	Gas Turbine Power Plant
GWP	Global warming potential
HC	Hydrocarbon
H <sub>2</sub> S	Hydrogen sulphide
HP	High pressure
HR	Human Resources department
HRA	Health Risk Assessment
HSE	Health, Safety and Environment

HSE MS	Health, Safety and Environment Management System
HSEQ	Health, Safety, Environment and Quality Controllership
HSSE	Health, Safety, Security and Environment
ILM	Institute of Leadership & Management
IMT	Incident Management Team
IPCC	Intergovernmental Panel on Climate Change
ISO 14001	Internationally accepted standard that sets out requirements for putting in place an effective Environmental Management System
IT	Information & Telecommunication department
JMC	Joint Marketing Committee
JOC	Joint Operating Committee
JPC	Joint Procurement Committee
JSC	Joint Stock Company
KATS	Karachaganak-Atyrau Transportation System
KEP	Karachaganak Expansion Project
KGDBN	KPC Gas Debottlenecking Project
KMG	KazMunaiGas
KMGK	KazMunaiGas Karachaganak
KOGCF	Karachaganak Oil and Gas Condensate Field
KOTS	Karachaganak-Orenburg Transportation System
KPC	Karachaganak Processing Complex
KPI	Key Performance Indicator
KPO	Karachaganak Petroleum Operating B.V. Kazakhstan Branch
kt	kiloton
KZT	Kazakhstan tenge
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
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 III 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
LLP	Limited Liability Partnership
LLC	Limited Liability Company
LTI	Lost Time Injury
LTIF	Lost Time Injury Frequency
Mboe	Millions of barrels of oil equivalent

# GLOSSARY

MoU	Memorandum of Understanding
MPC	Maximum permissible concentrations
Mscm	Million standard cubic metres
MSHF	Multistage hydraulic fracturing
NC	National Company
NCP	National Contact Point
NGO	Non-governmental organisation
NOx	Nitrogen oxide
OECD	Organisation of Economic Cooperation and Development
OGP	International Association of Oil and Gas Producers
OHSAS 18001	Internationally recognised assessment specification for occupational health and safety management systems
OPITO	Offshore Petroleum Industry Training Organization
OpCom	Operating Committee
OPS	Oil Pumping Station
P&M	Production & Maintenance
POB	Personnel on board – personnel calculation system
PPE	Personal Protection Equipment
PSIM	Process Safety & Integrity Management
RACIE	Responsible, Accountable, Consulted, Informed, Endorsed – approach to responsibility distribution
R&D	Research & Development
RoK	Republic of Kazakhstan
RTI	Road Traffic Incident
SES	Sanitary Epidemiological Station
SMS	Security Management System
SO <sub>2</sub>	Sulphur dioxide
SPZ	Sanitary Protection Zone
STEP	Safety Training and Enhancement Programme
TCCF	Thermo-Mechanical Cuttings Cleaning Facility
TRI	Total Recordable Incident
TRIF	Total Recordable Injury Frequency
UK	United Kingdom
USA	United States of America
USD	United States Dollars
WAED	Western Area Early Development
WKO	West Kazakhstan Oblast





# FEEDBACK

We are open to feedback from all our stakeholders. We believe this will facilitate improving our performance.

If you have any comments to this edition or want to contribute to the Sustainability Report 2014, please email us at: [sustainability@kpo.kz](mailto:sustainability@kpo.kz).



KPO Sustainability

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