Karachaganak

KARACHAGANAK SUSTAINABILITY REPORT 2015

TOWARDS SUSTAINABLE FUTURE

BG GROUP eni Chevron LUKOIL КазМунайГаз

CONTENTS

Lost Time Incident rate –
0.11

Road Traffic Incident rate –
0.03

Total Recordable Incident rate –
0.30

Stabilized and unstabilized liquid hydrocarbons' production –
141.7 mln BOE

Nationalisation of personnel in:
- management –
79%
- professional and supervised workers –
96%

Gas utilisation –
99.85%

Local Content share –
48.78%

The longest well drilled of
6,662 m
with horizontal displacement of
1,400 m

0 significant spills

OUR COMMITMENT TO SUSTAINABLE DEVELOPMENT

THIS IS THE EIGHTH SUSTAINABILITY REPORT ISSUED BY KARACHAGANAK PETROLEUM OPERATING B.V. (KPO) WITH THE AIM TO DEMONSTRATE OUR CONTINUOUS COMMITMENT TO SUSTAINABLE DEVELOPMENT. IN 2009, KPO WAS THE FIRST COMPANY IN KAZAKHSTAN TO ISSUE AN INDEPENDENTLY ASSURED SUSTAINABILITY REPORT IN ACCORDANCE WITH INTERNATIONAL STANDARDS. IN 2014, KPO BECAME THE FIRST COMPANY IN KAZAKHSTAN TO ISSUE THE SUSTAINABILITY REPORT IN ACCORDANCE WITH THE GUIDELINE 4 OF THE GLOBAL REPORTING INITIATIVE (GRI G4).

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.

LETTER FROM GENERAL DIRECTOR

Dear readers,

I am very pleased to present the eighth Sustainability Report of the Karachaganak Petroleum Operating B.V. Kazakhstan branch. The Report has long become our key communication tool and is a vivid reflection of our continuous commitment to sustainable development.

In an attempt to follow the best international practice in non-financial reporting against the standards offered by the Global Reporting Initiative (GRI) G4, in this edition we disclose our progress in social, environmental and economic areas achieved in 2015 through continuous engagement with our stakeholders, presented in this chapter in brief and discussed further in more detail.

In 2015 KPO was able to maintain high operational results despite all the the recent challenges faced by the oil and gas industry across the world. Developing such large scale projects as Karachaganak is a challenging task in the current market conditions.

Safety and Asset Integrity

The oil and gas sector, although a highly technological industry, is nevertheless inherently predisposed to dealing with hazardous materials and we must never be complacent. Our goal is to conduct operations in a safe way and work towards a zero incident practice.

In 2015, the KPO's and contractors' lost time injury (LTI) rate reached 0.11, which was lower than 0.20 achieved in 2014. Out road traffic incidents (RTI) also decreased from 0.10 in 2014 to 0.03 in 2015. However, we had 8 recordable injuries in the past year, none of which were process related.

We have committed to prevention of any high potential incidents and increasing hazard awareness both amongst our employees and all our contractors and sub-contractors delivering services and works in Karachaganak. To this end, during 2015 KPO continued consolidating the Process Safety and Asset Integrity areas, where the Asset Integrity Management System had been continuously implemented and which includes barrier models and change management.

Production and sales

In 2015 the hydrocarbon production in Karachaganak reached 141.7 mln barrels of oil equivalent. 8.7 mln m^3 of dry sour gas were injected into the reservoir, the volume equivalent to approximately 47.4% of the total gas produced. The shutdown activities held in 2015 were carried out on schedule and without any incidents – entirely at Unit 3 and with partial overhaul at KPC and Unit 2.

In 2015 our deliveries of stabilised oil to western markets maintained at 10 mln tonnes, i.e. similarly to 2014. As a result of successful implementation of incremental Summer Gas Sales programme, KPO delivered 8.8 bln m^3 of raw gas to Orenburg Gas Plant, which is the highest KPO record in gas supply. The extension of the Karachaganak Gas Sales Agreement signed between KPO and KazRosGas in June 2015 will provide for gas supply for processing at Orenburg facilities until 2038. Our program of drilling new wells and hooking them up to our production facilities continued with a target to optimize production and avoid any decline. In 2015, the record performance in drilling operations at Karachaganak was made by well 9848, the longest well ever drilled to the total depth of 6,662 m with horizontal displacement of 1,400 m.

Environmental performance

In 2015, the KPO gas utilisation rate reached phenomenal 99.85% which again demonstrates a world-class level. KPO specific GHG emissions decreased from 75 tonnes in 2014 to 72 tonnes of CO_2e per kiloton of hydrocarbons produced in 2015. According to the data published by International Association of Oil & Gas Producers, KPO remains far below the average European levels and the average international levels in the oil & gas industry.

In order to reduce the fresh water intake for technical needs, the Company has been reusing the treated wastewater. In 2015, the volume of reused wastewater for preparation of drilling mud and dust suppression amounted to 8% of the total consumption of technical water from the Konchubai gully hence less water intake from natural water resources.

In 2015 our Health, Safety and Environmental management system successfully passed a surveillance audit for the compliance with ISO 14001 and OHSAS 18001. Based on the results of the 2015 energy audit, KPO will proceed with the implementation of its energy saving and efficiency improvement action plan developed for the period 2016-2020.

In 2015 we attended two Public Hearings where KPO Environmental Protective Measures Plan was presented to the communities.

In anticipation of the field expansion activities in the years ahead, a new Sanitary Protection Zone (SPZ) design was submitted and approved by the authorities during the year.

Employee Development

As the largest employer in the Western Kazakhstan region, KPO provided thousands of long-term local jobs with competitive salaries. As part of the nationalization programme in the past year, additional 8 senior and 13 mid-level managerial positions were nationalized. As of end 2015, our local personnel made up 96% of total professional and supervisory positions and 79% of all managerial positions.

In the period reported we continued investing in employee development, although at a smaller extent than previously, and focused rather on mandatory training courses, ongoing international and professional programs initiated in previous years, and internship with Parent Companies.

Investment into Economy

In 2015 the Kazakh content in goods, works and services at KPO made 48.8 % which in monetary terms is over USD 581 mln.

In 2015 we reviewed our Local Content Policy. Throughout 2015 KPO carried out a number of initiatives at different levels, aimed at facilitating the potential vendors' access to and inclusion into, KPO's procurement planning process both for current operations and in the run-up to the forthcoming Project expansion.

Every year KPO funds several large social infrastructure projects in the West Kazakhstan Oblast (WKO) from the annual sum of USD 20 mln social spend. Additionally, during 2014-2016 KPO allocated USD 10 mln per annum for projects in the Burlin district of the WKO. Overall, as of the end of 2015, KPO had invested USD 270 mln into the social infrastructure development in the WKO.

Community Engagement

Our engagement with the local communities and authorities continued successfully in 2015 with two public hearings held on the KPO Environmental Protective Measures Plans. 18 Village Council meetings were held with rural communities around the Field and in Aksai, where environmental, economic and social issues were addressed.

In accordance with the Government Resolution № 595 of 28.07.15, resettlement of the communities falling within the new Sanitary Protection Zone was initiated in 2015 and will be led by the West Kazakhstan Oblast. The first phase of the resettlement was completed in December 2015 with 82 families from Berezovka and Bestau being resettled to the brand new apartments in Aksai. Various consultations were conducted with the villagers throughout the year and will be continued in 2016 as part of the second resettlement phase.

Throughout the year KPO implemented several community development projects aimed mainly at support of elderly and children. A number of fund-raising charity events involving our employees was hosted to raise funds in support of the local schoolchildren in need.

In conclusion I would like to reassure our readers that we will continue fostering long-term relationships with all our stakeholders based on our genuine desire to improve and advance in pursuit of universal sustainable development goals.

Renato Maroli
KPO General Director

MATERIAL ASPECTS AND STAKEHOLDER ENGAGEMENT

Sustainability is absolutely essential for our long-term performance from the risk and stakeholder management standpoint. This was explicitly declared in KPO Sustainability Charter, introduced in 2009.

As per the Charter, KPO mission is to develop the Karachaganak Field in an environmentally and economically sound manner whilst simultaneously increasing the social-economic development opportunities for local communities. We see significant opportunities for us in developing national personnel, attracting and supporting qualified local suppliers, and aiding the social development of regional communities.

The Venture's progress along this arduous yet tremendously rewarding journey is presented in the so called Sustainability Reports that have been issued for eight years in a row.

In the process of drafting the Report, we seek to comply with the acknowledged international best practices on non-financial reporting. The Global Reporting Initiative's G4 Guidelines are used as the guiding principles, and the relevant sustainability data is disclosed with reference to the International Oil & Gas Producers' Association (IOGP) guidelines.

Material aspects

Year after year we work on improving our sustainability reporting process. For defining material aspects and boundaries for the annual Sustainability Report we follow the GRI guidelines.

Our material aspects are identified in consequence of multilateral engagements with various regulatory authorities, our Parent Companies, the PSA LLP, business partners, contractors, local communities and media. Stakeholders may raise an issue of concern during any of the numerous encounters that range from Village Councils to forums, public hearings, audits, or by even grievance letters. Simultaneously, we develop targets and benchmarks to measure the contribution to sustainability made by different KPO divisions. The analysis of risks and opportunities is also carried out in the process of devising the content.

The material issues cover the relevant economic, environmental and social impacts related to all of the KPO's activities, products, services and relationships or the influence they have on the assessments and decisions made by stakeholders. Both internal and external occurrence of the impacts is identified.

The material aspects are then prioritized and relevant GRI standard disclosures are selected in line with management approaches and performance indicators. We thoroughly review the Global Reporting Initiative Guideline 4 and its Oil & Gas Supplement to insure conformity with the GRI requirements. The material aspects of the previous reporting period are reviewed taking into account stakeholders' opinion for potential disclosure in the next reporting period.

The sustainability reporting process itself includes the exchange of information, collection of data and interdisciplinary communication both internally and externally. At the same time this exercise helps improving internal cooperation within the Company and raising internal and external awareness of the best available reporting practices. As the Sustainability reporting process evolves within KPO, the techniques of engagement with stakeholders continue evolving accordingly.

In 2015, in view of obtaining our stakeholders' views on our disclosed material aspects in a more structured

way, we introduced the feedback sheets to the printed copies of the Sustainability Reports 2014 and placed an online questionnaire on our website www.kpo.kz. Their feedback is summarised in the Table № 1 below.

TABLE №1 **Material aspects on sustainable development**

SOCIAL	LABOUR PRACTICES AND DECENT WORK	Occupational health and safety of employees (also material for our contractors)
		Protection of employees health
		Employment and compensation
		Personnel development and training
		Diversity and equal opportunity
		Labour / Management relations
		Labour practices grievance mechanisms
	HUMAN RIGHTS	Security practices
		Freedom of association and collective bargaining
		Human Rights Training
	SOCIETY	Anti-corruption
		Grievance mechanisms on the Project's impacts on local communities
		Interaction with exposed local communities, methods of assessment and mitigation of impact
		Emergency preparedness, mechanisms of involvement of local communities
		Asset integrity and Process safety
ENVIRONMENTAL		Reduction of GHG and pollutants
		Air monitoring
		Management of waste and effluents
		Spills
		Use of water resources
		Energy use management
		Biodiversity and ecosystems conservation
		Environmental grievance mechanisms
		Environmental investments
		ISO 14001 and OHSAS 18001 certification
ECONOMIC		Increase of local content in staff
		Impact of infrastructure investments in the territories with our presence, including support for local communities
		Investment initiatives to energy access for local community
		Local Content development and its share in procurement of goods and services
		Procurement practices and supply chain
		Transparency of payments to the government (EITI)
		Estimated proved reserves and production

Stakeholder engagement

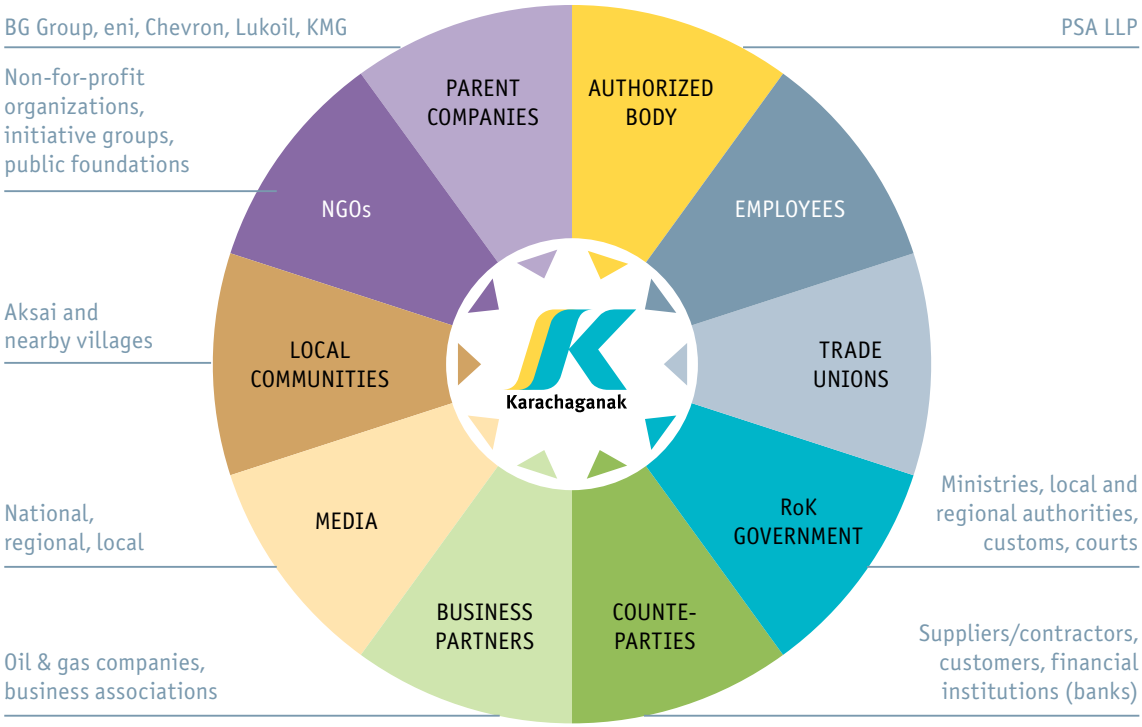
It is universally acknowledged that stakeholder engagement is a corner-stone of sustainability and a key to the business's success. We connect to our stakeholders in order to foster relationship and because we are genuinely keen to hear their voices and opinions.

In the Sustainability Report we share the highlights of our performance with the stakeholder groups listed below:

KPO divisions identify their own stakeholders and share their experience in terms of stakeholder engagement for the consolidated Report.

As was referenced earlier, in this edition we focus on our ways of engagement with the key groups of our stakeholders and talk about the issues addressed in the process. Methods and forms of engagement applied at KPO vary from reports and meetings to conferences, forums and surveys.

PIC. №1 **KPO stakeholder groups**



Regulatory Bodies and Ministries

Apart from daily business correspondence and reports, we regularly attend meetings with state authorities were discussed are issues ranging from regulatory compliance to local content, development projects, personel development, etc.

For instance, in February 2015 KPO signed a number of joint agreements and memorandums of understanding aimed at fostering local content development in the Karachaganak project including the forthcoming expansion activities.

In September 2015, KPO joined the Memorandum of Cooperation with the RoK Ministry of Energy, KazEnergy Association, PSA Authority and North Caspian Operating Company N.V. (NCOC) aiming at improving professional skills of Kazakhstani specialists.

In November 2015, KPO held a workshop for international and local manufacturers of electrical equipment and cable products. Discussed were KPO procurement needs as part of the Karachaganak Expansion Project (KEP-1) and how KPO can support in creating business partnerships and joint ventures.

At the KazEnergy Eurasian forum in Astana, October 2015

Business partnerships and membership in associations

We consider our partnership in Kazakhstani associations, such as Kazakhstan Association of Oil Gas and Energy Section 'KazEnergy', Kazakhstan Business Council for Sustainable Development 'KAPUR' and Kazakhstan Petroleum Association (KPA) as strategically important. This gives us an opportunity to network with the industry peers and provides access to the collective lobbying tools such as working groups and committees.

In October 2015, KazEnergy Association and JSC "NC KazMunayGas" together with the three major oil & gas operators in Kazakhstan – KPO, North Caspian Operating Company N.V. and Tengizchevroil LLP – conducted a joint forum of vendors titled "Aktau declaration: Synergy and Localization" in Almaty. The objective was to summarize the outcomes of the September 2012 Aktau Declaration aimed at facilitating the development of the local market of goods and services and localization of prioritized commodity areas required for the oil and gas sector. The forum was attended by over 50 Kazakhstani machine building and engineering enterprises, some 30 foreign manufacturers, the representatives of the Ministry of Energy of the Republic of Kazakhstan, and the Ministry of Investments and Development of the Republic of Kazakhstan.

Our Sustainability Report for 2014 has become a prize-winner in the contest for open reporting on corporate social responsibility and sustainable development conducted by Kazakhstan Business Council for Sustainable Development 'KAPUR'. KPO report on sustainable development for the year 2014 received the First Award in the nomination "The Best Design and Presentation of Information". The contest results were announced during the 12th Central Asian International Exhibition and Conference on Environmental Technology and Green Innovation 'EcoTech 2016' held in Astana on 27-28 April 2016. As a regional partner of the World Business Council for Sustainable Development, the Kazakhstan Business Association for Sustainable Development facilitates the promotion of corporate social responsibility in Kazakhstan through this contest.

In November 2015, in recognition of KPO employees' contribution to development of the oil, gas and energy industry three employees were awarded with certificates from the KazEnergy Association. Furthermore, these employees were included in the biographical reference book "Women in Kazakhstan's Energy Sector 2015" consolidating over 80 major players in the oil, gas and energy complex of the country.

Employees

Engagement of employees in sustainability areas is achieved both via corporate communication about the Company's achievements and development and by means of their participation in different events and initiatives, such as surveys, e-learning, forums and thematic workshops related to health and safety, personnel development, and other labour practices.

In 2015 KPO carried on with Safety Stand Up meetings across all the locations. In April 2015, the regular Safety Stand Up meetings were organized at 23 work locations with the aim to improve implementation of the behavior based safety in daily activities. The safety message by KPO senior management was communicated to reinforce the importance of the Company's commitment to safety and everyone's responsibility to help prevent potential accidents. This event involved more than 2,000 people altogether.

Implemented since 2012, KPO HSE Award Incentive Scheme is aimed to encourage and motivate each employee to demonstrate positive HSE behavior. The increasing demand and outstanding results of the use of this scheme shows the steady growth in KPO safety

Unit 2 Operators awarded for personal contribution to the HSE

culture year by year. More detailed information can be found in the HSE Cards Programme section of this Report.

Furthermore, in 2015 KPO has continued working on attracting young oil & gas professionals through cooperation with the Kazakhstani universities through different events as described further in the chapter 'People & Skills' of this Report.

Trade Unions

Trade Unions play the important role in supporting and protecting the rights of employees. The signing of the new Collective Agreement planned in 2015 was suspended until spring 2016 in consequence of recessionary measures in Kazakhstan's economy and expected amendments in the Kazakhstani Labour Code.

As part of the Collective Agreement, Trade Unions regularly engage employees in various sport events. Of those, the most memorable event was dedicated to the International Women's Day, where the KPO female team won a champion's medal amongst the participated teams in the Burlin district. The sport contest involved 14 companies and educational institutions of the Burlin district and covered different sport activities.

Contractors

Interaction with various contracting organizations of KPO is conducted at different levels.

In line with the planned vendor development activities, KPO organised 63 training courses for 31 local contractors in the period of October – December 2015. The main objective of the training was to familiarise the participants with international business approach to planning and project management, best world-wide practices and preparation for the ISO standards certifications. The training was appreciated by the participants, who shared their positive feedback.

According to the annual HSE Improvement Plan, KPO regularly holds joint forums on HSE issues with engagement of its contractors. This creates an opportunity to improve safety both at KPO and in its contracting organizations. On 10 July 2015 KPO held an HSE Forum with senior management of its high risk contractors. The forum was dedicated to the role of leaders in raising hazard awareness and evolving the safety culture. Some 30 national and foreign contractor organisations took part in the forum.

In line with the 2014 HSE Commitment Pledge signed by contractors at the previous HSE Forum, throughout 2014-2015 the contractors conducted HSE competency assessment in 10 key critical areas of their supervisors. Some contracting organisations have fully adopted HSE competency assessments based on the guideline proposed by KPO. Those contractors who implemented their 2014 HSE Commitment Pledge received the recognition awards from the KPO senior management. The new Pledge for 2015 was also signed at the forum. Additionally, at the event KPO shared with contractors its Cascade Programme called 'KPO in Safety', which was discussed in feedback sessions. By way of this forum both KPO and its contractors engage in efforts of continuous improvement of the HSE leadership and culture.

KPO works on raising awareness on environmental protection of its contractors and their compliance to the ISO 14001 international standard. On 6 March 2015 KPO conducted a Conference for its contracting organisations on implementation of the KPO Environmental Policy and assurance of environmental safety in fulfilment of contractual obligations. Representatives of some 50 local and foreign contractors attended the conference.

The Conference was focused on establishing an open dialogue between KPO and the contracting organisations on applied methods of identification the environmental aspects and their assessment. Based on the results of the Conference, 15 registers of environmental aspects owned by KPO operational departments have been updated or newly developed. Additionally, 39 Contractors' registers on environmental aspects have been developed, including by those Companies who do not have their own certified management systems. By virtue of the above endeavours KPO monitors the environmental supply chain and provides positive contribution to the contractors' performance and their environmental awareness.

Local communities

The main tools of KPO engagement with local communities are public hearings and the Village Councils. KPO brings to the public hearings issues related to the Field operation activities, which may affect the interests of local communities. The public hearings are usually held with the support of the local executive body – the Akimat of Burlin district. In June 2015 KPO presented for public consideration the Environmental Protection Measures Plan for the second half of 2015, which was effectively approved. More detailed information about this is provided in the chapters 'Community Engagement' (p. 90) and 'Caring for the Environment' (p. 59).

Also, at the Village Council meetings people raise issues related to the local social infrastructure, such as repair of roads and water systems, employment and air quality monitoring.

More information about our community development programmes is disclosed in the chapter 'Community Engagement' on p. 94.

In order to enhance people 's awareness of the Project and in support of the community preparedness, KPO hosts training exercises involving KPO rescue services and emergency response groups who actively interact with local authorities at both district and village levels for the villages situated near the Field and along the export pipeline Karachaganak – Bolshoi Chagan – Atyrau. This engagement has proved very efficient in recent years and has largely contributed to the reduction of illegal taps into the export pipeline.

Non-government organisations (NGO)

We actively engage with local and regional community-based organizations and assist with various charity events in support of socially vulnerable community groups.

In 2015, KPO continued its cooperation with the "Zhas Daryn" Public Foundation and provided funding to support disabled and disadvantaged children.

KPO also helped the Veteran's Council of the Burlin District sponsor the recreation and treatment of retired people and WW2 veterans at Akzhaik Sanatorium in Uralsk.

Award "The Best Design and Presentation of Information" from Kazakhstan Business Council for Sustainable Development 'KAPUR'

OPERATIONS OVERVIEW

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.

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 m, is some 1,600 m 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.

According to the Reserves Re-Determination Report for the Karachaganak field accepted by the RoK State Reserves Committee (GKZ) at a meeting of the GKZ on 18.03.2014, it is estimated that the Karachaganak Field contains 12 bln barrels of liquids and 57 trillion cubic feet of gas, of which approximately 12% has been recovered to date.

As of end 2015, 4,401 people worked in the KPO talented and multicultural team. Since the signing of the Final Production Sharing Agreement (FPSA) in 1997, the Contractor (to date jointly the five Parent Companies under the Karachaganak Settlement Agreement and the Final Production Sharing Agreement) has invested more than USD 20.6 bln to develop the field, applying leading-edge technology aimed at maximizing sustainable economic value and minimising environmental impact.

KPO OPERATING FACILITIES

Hydrocarbon production and processing occurs at the three major units: the Karachaganak Processing Complex (KPC), 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. Amongst the facilities there is an Early Oil Production Satellite (EOPS) and Eco Centre.

The transportation system operated by KPO includes the main export route for stabilised liquid hydrocarbons Karachaganak Atyrau Transportation System (KATS) with two pumping stations: one at KPC and the other at Bolshoi Chagan, and a receiving and storage facility in KPO Atyrau Terminal. The other export route is the Karachaganak Orenburg Transportation System (KOTS), which is used by KPO for transporting hydrocarbons to Orenburg Gas Plant in Russian Federation.

As of end 2015, 100 operating wells and 17 sour gas re-injection wells were online at Karachaganak, from a total well stock of 406 wells.

More detailed information about the facilities can be viewed in our Sustainability Report 2014, pp. 6-8.

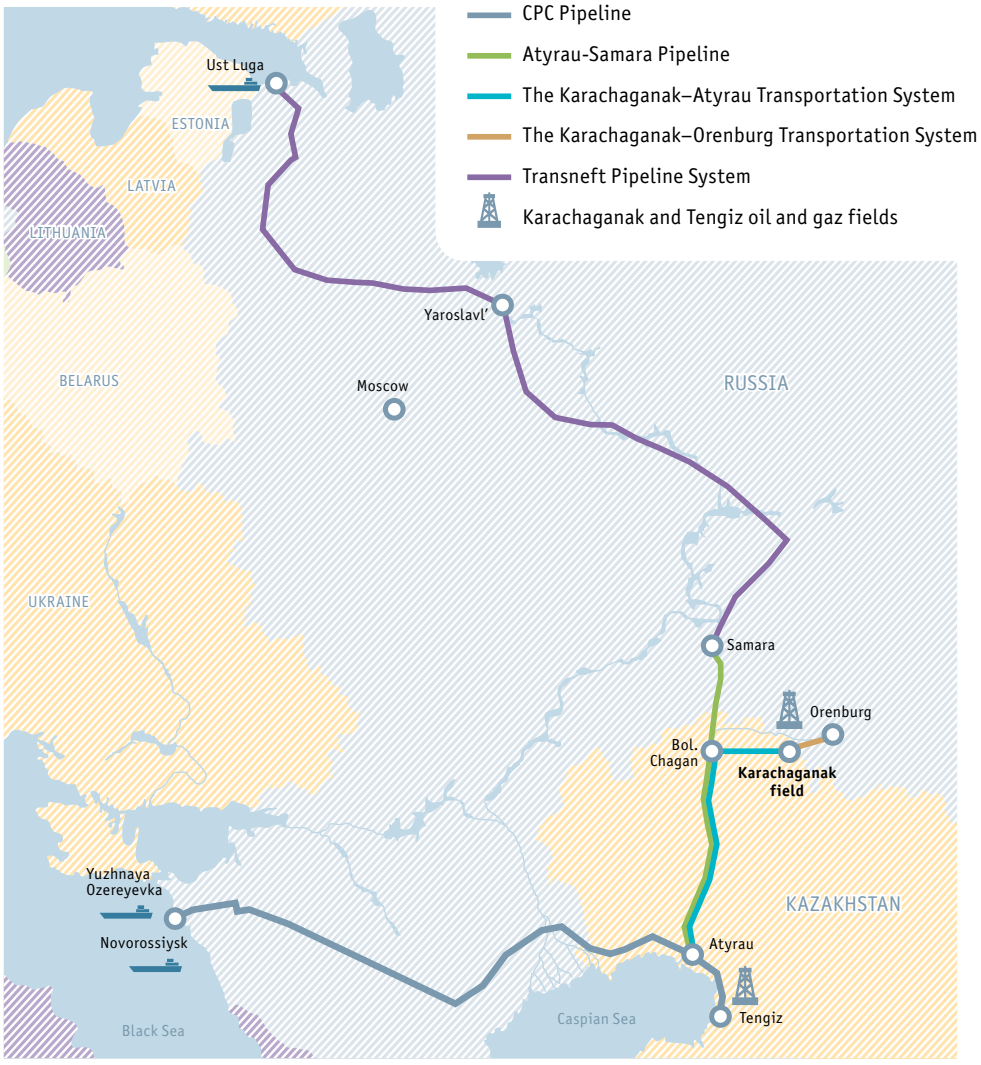
OUR PRODUCTS AND EXPORT ROUTES

The majority of produced hydrocarbons are exported to maximize net sales revenues. In 2015, around 95% of liquid production was sold as stabilised oil to Western markets via the Caspian Pipeline Consortium (CPC) pipelines and the Atyrau-Samara pipeline via the Transneft system.

The CPC pipeline delivered KPO oil to the Black Sea port of Novorossiysk whereas the Atyrau-Samara pipeline was used to deliver oil to the Ust'-Luga port in the Baltic Sea. In 2015 the ongoing CPC expansion programme enabled KPO to export record volume of oil through the CPC pipeline, amounting to 9.4 mln tonnes. Additionally, nearly 0.7 mln tonnes of oil was exported via the Atyrau-Samara pipeline in this period. 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 either re-injected into the reservoir to maintain reservoir pressure, sold as raw gas under the long-term contract with KazRosGas LLP, or sweetened (i.e. hydrogen sulphide is removed) to generate electricity for KPO facilities and for local power distribution by Aksaienergo LLP and Batys Energoresursy LLP.

PIC. №2 **Our export routes**



In June 2015 KPO and KazRosGas LLP signed an extension of the Karachaganak Gas Sales Agreement with KazRosGas LLP until January 2038. The amendment implies that additional 120-135 bln cubic metres of gas will be supplied to KazRosGas LLP for processing at Orenburg facilities till the end of the contract period.

Power supply to West Kazakhstan Oblast has reduced due to a force-majeure event at the KPC power plant in June 2015; however KPO managed to fulfil its FPSA obligation on power supply at the level not less than 20 MW and supplied 26 MW to the local power distribution companies.

In 2015 KPO implemented the Summer Gas sales programme during the period of planned maintenance at the Orenburg Gas Processing Plant in May-October. As a result of the programme KPO delivered incremental 242 mln standard cubic meters of raw gas during May-October 2015. The total incremental production as a result of the Summer Gas sales programme in 2015 (including associated liquids) was about 1.7 mln barrels of oil equivalent. In 2015 KPO delivered 8.8 bln cubic metres of raw gas to Orenburg, which is the highest historical record of KPO in gas supply.

Within 2015 KPO re-injected 8.7 bln cubic meters of gas into the reservoir, a volume equivalent to about 47% of the total gas extracted, in order to maintain pressure and increase the future liquid recovery rate.

2015 OPERATIONS

In 2015, KPO produced over 141 mln barrels of oil equivalent (BOE) in the form of stable and unstable liquids, and gas. Delivery of gas in 2015 reached 8.8 bln cubic meters.

TABLE №2 **Production in 2015**

		2013*	2014	2015
Total Production	Mboe	**136.0**	**142.5****	**141.7****
Total equivalent stable oil	kt	10,492	11,004	10,796
Total gas production	Mscm	17,531	18,248	18,234
Gas Injection Gas re-injected into a reservoir, not sold	Mscm	8,570	8,818	8,652
Sweet Gas used at KPC for internal needs	Mscm	637.8	689	687.5

* *Shutdown year*
** *This number does not include the volume of gas injection*

TABLE №3 **Sales in 2015**

		2013*	2014	2015
Total Sales	Mboe	**132.1**	**137.9**	**137.6**
Unstable Liquids Condensate to Orenburg Gas Plant and Small Refinery	kt	914	732	677
Stable Liquids Oil and stabilised condensate to CPC and Atyrau-Samara	kt	9,700	10,269	10,127
Raw Gas to Orenburg Gas Plant	Mscm	8,197	8,594	8,799
Sweet Gas to the WKO community	Mscm	98.7	114.3	68.1

Shutdown

The KPO Shutdown strategy remains focused on optimisation of production by extending intervals between shutdowns and reduction of actual shutdown durations whilst ensuring safe continuous operation and regulatory compliance.

In planning the shutdown activities KPO applies a risk based inspection (RBI) approach. Extending the shutdown intervals is made on adoption of risk based intervals covering all main equipment types while meeting applicable requirements in Kazakhstan. Other activities include installation of new or upgraded equipment and 'engineering out' shutdown activities through necessary modifications.

In 2015, planned shutdown activities were successfully executed on schedule – incident and injury free. This involved total shutdown of Unit 3 and minor activities at both KPC and Unit 2.

Drilling

In 2015 three drilling rigs and one work-over rig were in operations.

The programme of well workovers to optimise production and re-injection in the Field continued during the year. 7 new wells and 5 side track wells were successfully drilled and completed with swelling packers. 8 wells were hooked up.

In 2015, the record performance in drilling operations at Karachaganak was made by the well 9848, the longest well ever drilled in the Field to total depth (6,662 m) with horizontal displacement of 1,400 m. This performance was again achieved thanks to the lessons learnt and previous extensive use of Rotary Steerable Systems (RSS) in the field operations.

564 meter continuous coring activities in well 9842 resulted in 100% recovery factor, which made another achievement.

Besides, all the wells started in 2015 were top quartile thanks to the continued innovation and study to reduce dynamic vibrations in BHA (bottom hole assembly) that lead to a longer durability of LWD (logging while drilling) tools.

Among the technologies used, the following can be given emphasis to:

- Successfully run pressure acquisition tool LWD in horizontal section (6" hole);
- Solved 16" hole instability issues utilising underreamer technique in all the field;
- Reduced acid volume in acid stimulation, that lead to a reduction in flaring activities;
- Introduction of multiphase pump at the end of the year to reduce flaring activity and speed up well clean-up;
- Casing wear protector, tested since 2014, confirmed to be a solution to allowing re-entering old wells with high corrosion and casing wear.

Water Management strategy

Managing produced water is one of the main challenges facing the Karachaganak field where increasing produced water rates combined with a production facility which was not originally designed to handle significant water production is resulting in production losses, risks to asset integrity, and environmental compliance.

An additional challenge for KPO is locating sources of sufficient water required for production as well as potable water both for production personnel as well as personnel engaged on the construction of new facilities.

KPO has developed a field wide water management strategy that addresses the issues of both produced as well as consumed water in the short, medium and long term to the end of the FPSA. This strategy is being implemented through a number of small projects and operational initiatives.

Power Generation Strategy

KPO has been producing and exporting power to the WKO community since 2001. It has been exporting approximately 45 MW in winter and 27-45 MW in summer.

In 2014 the WKO Akimat requested that KPO increase the power export to 80-100 MW. The Authorised body PSA LLP was also informed about this. The existing electricity transmission system between the KPO Gas Turbine Power Plant (GRPP) and the West Kazakhstan Regional Electricity Company (REC) allows transmitting up to 60-65 MW. However, exporting more power requires a system upgrade, in other words carrying out the design and construction of additional power lines. At the same time, at least additional 60 MW generating capacity will be needed to increase the electricity generation at the GRPP for the WKO.

Accordingly, this requires additional quantities of sweet gas, which in turn would require an upgrade or expansion of the existing KPO gas treatment facilities.

KPO considers another option to export power up to 60 MW to the WKO through the construction of an additional 5th generator at the GTPP and its allocation to operate solely for the WKO network.

Following endorsement from the Authority, KPO will develop a cohesive strategy linking sweet gas production for the new operational facilities, power generation and upgrade of the power lines.

DEVELOPMENT ACTIVITIES

As the Contractor to the Republic of Kazakhstan, KPO has an obligation to conduct all operations necessary to carry out the development and production of petroleum in the contract area in accordance with International Good Oil Field Practice. Following the completion of the Karachaganak Phase II Initial Program, KPO is now funding and implementing the Phase II Maintenance Program (Phase IIM), which includes the further activities, such as drilling new development wells, undertaking workovers on existing wells, upgrading production facilities and other projects required to maintain the production level to the economic benefit of the RoK.

More specifically, additional facilities, field infrastructure and wells are required to avoid the increasing gas-oil-ratio causing the existing facilities to become gas constrained and thus cause a liquids production decline. In response a programme of Plateau Extension Projects (PEP) has been developed.

During 2015 KPO continued the maturation of these PEP projects, which included but were not limited to the Unit 2 Gas Injection Upgrade Project, Sour Gas Liquids Treatment Project and KPC Gas Debottlenecking Project. These projects are at varying stages of maturity and continue to be developed in order to reach the point that an investment decision can be taken.

Karachaganak Expansion Project (KEP)

KPO is continuing the development of the Karachaganak field via the Karachaganak Expansion Project (KEP), which is scheduled to be completed in a phased manner. This development is consistent with KPO's obligations to the Republic of Kazakhstan in the longer term.

The KEP project creates additional value for the Karachaganak Parent Companies and the Republic of Kazakhstan to the end of the FPSA period and the duration of the Field life. This is achieved by optimising stabilised liquid sales through the provision of additional wells, process facilities and secure gas export routes, in a manner that is aligned with the objectives of all stakeholders.

Started in 2014, the concept assessment and selection activities for KEP 1 have been completed in 2015. These activities 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 assist in the demonstration that the layout, segregation and design of the new facilities will reduce risks during these activities to the lowest practicable level.

KEP will utilise inherent safety features in the design of systems and equipment and this will minimise 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 technological solutions that will minimise physical operator attendance at process facilities and by doing so limit the risk exposure of operational staff.

One of the principle objectives of KEP is to minimise any environmental impact. Best practices in air dispersion modelling of KEP emissions are being undertaken to assess any impact on the boundary of the Sanitary Protection Zone (SPZ) around the field.

In 2015, further studies were carried out to optimise the project and an Invitation to Tender was issued to international engineering companies in partnership with local engineering companies. The next stage of the project will be the Front End Engineering Design (FEED) phase, which will further develop the design of the facilities providing further detail.

RESPONSIBLE OPERATOR

GOVERNANCE AND MANAGEMENT APPROACH

Governance Structure

In accordance with the Final Production Sharing Agreement (hereinafter as FPSA), Karachaganak Petroleum Operating B.V. (hereinafter as KPO) is a Joint Venture that has been operating the Karachaganak oil and gas condensate field since 1997 (hereinafter as the Karachaganak Field).

KPO is a Joint Venture partnership between five international oil and gas companies (hereinafter as Contracting Companies):

- eni (29.25%),
- BG Group (29.25%),
- Chevron (18%),
- LUKOIL (13.5%),
- NC KazMunayGas (10%).

Effective governance, controls, and assurance processes are essential to our ongoing success, sustainability of the Venture and investments. The Contracting Companies brought in their combined international experience so that the maximum value can be realized from the Karachaganak Field.

KPO organisational structure has been designed to help us meet our business objectives and fulfil our obligations vis-a-vis the Republic of Kazakhstan represented by the Authorised Body – "PSA LLP".

As per the FPSA two high governance committees operate in the Joint Venture:

- Joint Operating Committee (JOC);
- Joint Marketing Committee (JMC).

The most senior management body is the Contractor's Committee (ConCom), which is responsible for the determining the Contracting Companies' position on any issue to be discussed and voted upon at the JOC and the JMC.

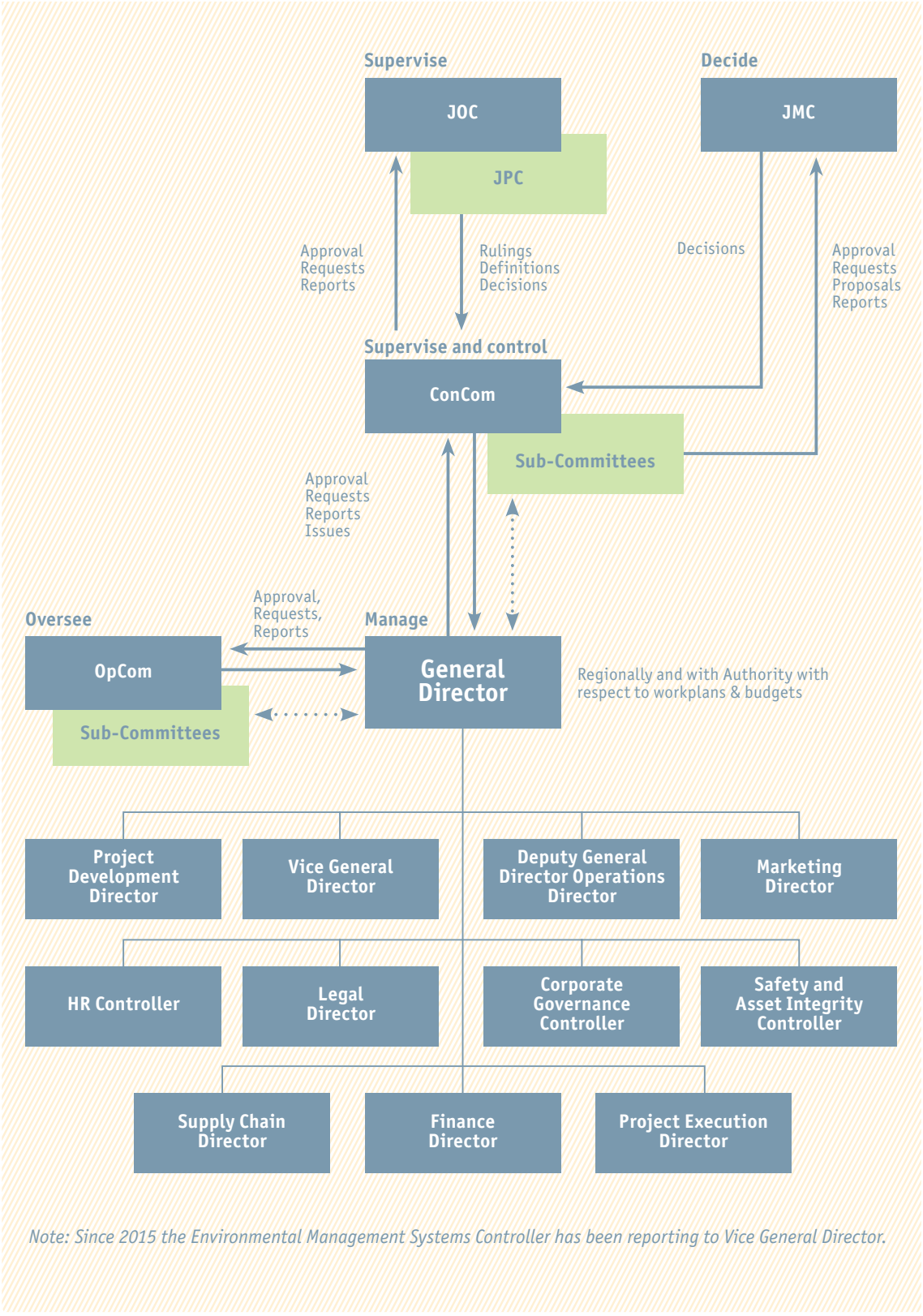
The next level of the management body is the Operating Committee (OpCom) comprising of the Operator Companies – eni and BG Group. The role of the OpCom is to perform overall control over the KPO activities and to ensure the Operators fulfil their obligations.

Overall governance structure was described in detail in our previous Reports, namely Sustainability Report 2014, pp. 22-24. In this edition we aim to report about the changes that happened during 2015. In the past year the change of KPO Directors between BG and eni took place.

As of end 2015 the KPO governance structure including Committees' framework is depicted on the following page.

KPO General Director Renato Maroli and KPO Vice General Director Marat Karimov attending the KazEnergy forum

PIC. №3 **Karachaganak Venture Senior Management structure**



Note: Since 2015 the Environmental Management Systems Controller has been reporting to Vice General Director.

Furthermore, a number of sub-committees both for the ConCom and the OpCom are in place to support specific areas of expertise, such as:

ConCom	OpCom
1. Contractor's Marketing Committee (CMC)	1. Operations
2. Work Program and Budget	2. HSE
3. Finance	3. Security
4. Tax	4. Technical
5. Audit	5. HR
6. Insurance	6. Sustainable Development
7. Corporate Affairs and Government Relations	
8. Legal	

Management Systems

In all aspects of its activities and in accordance with the FPSA, KPO operates to internationally recognized standards which are implemented through a number of policies, procedures and appropriate best practices. These are embedded in our management systems and include the following, but not limited to:

- Karachaganak Corporate Management System Manual,
- Health, Safety and Environment (HSE) Management System and HSE Policy,
- Management System Manual for Operations Directorate,
- KPO Code of Conduct.

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

Sustainability activities in KPO are defined by the Sustainable Development Charter issued in 2009. This Charter set the guiding principles for the KPO's efforts towards sustainable development; and is drawn from international best practice and the Operator Companies experience.

Risk management

In general, petroleum operations are inherently bound to have impact on the environment, people and local communities. Some could be negative, such as air emissions and generation of waste, water and soil pollution, etc. For KPO as a responsible oil and gas operator, managing sustainability risks is of paramount importance. Such risks include, but are not limited to:

- personnel safety and asset integrity risks, mainly coming from potential emissions of hydrogen sulphide and illegal taps;
- environmental risks, mostly arising from potential spills, generation of waste and emissions to air;
- risks of ethical compliance both of our own personnel and of our contractors; and
- attracting and retaining qualified national personnel.

Within KPO a formal Risk Management process has been established to identify and effectively manage the business risks, which could be experienced by the Company during its activities. This process, as well as roles and responsibilities, is defined within the Risk Management Procedure.

Corporate Governance Controllership facilitates the constant development of risk management system and is responsible for maintaining the Corporate Risk Register. Corporate Risk Register contains the risks which may occur and have an impact at a corporate level as well as associated action plans to mitigate those risks.

The top corporate risks are reported to and discussed on the quarterly KPO Risk Committee Meetings with KPO senior management. After each Risk Committee, Corporate Governance Controller provides the ConCom with the quarterly Risk Register, which details the main information on KPO top risks in a concise manner ensuring information reliability and actuality.

KPO Risk Committee ensures diligent and careful treatment of all risks, which could have adverse impact on continuous provision and support of KPO strategy. As we have already mentioned above, sustainability risks are of major importance for KPO.

Detailed information on the measures on specific risks' reduction is reflected in the relevant chapters of this Report.

Assurance

KPO 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, and KPO's own Audit Model, which details KPO process areas and the required audit frequency for each area.

Every year our governance and assurance activities deliver to all KPO stakeholders the necessary confidence that effective controls over business processes are in place. Such activities include but not limited to:

- value assurance reviews, assists and workshops,
- capital project forums,
- internal audits.

Assurance reviews also occur on a regular basis, including an annual Parent Companies Audit (PCA) to give assurance that KPO complies with its own policies, standards and industry best practices, and regulatory reviews to ensure conformance to the applicable RoK legislation. The 2015 PCA was conducted in November 2015 and reviewed such areas as Legal Compliance, Finance, Contract Management, Project Management, and Information Technology.

As an additional tool for analysing the assurance coverage of all KPO departments, Corporate Governance implemented an Integrated Assurance Map – process for collecting information on all assurance activities within KPO both internal and external.

Extractive Industries Transparency Initiative

KPO continues supporting the Extractive Industries Transparency Initiative (EITI) aimed at ensuring transparency of incomes and overall chain of value creation in management of the natural resources of the Republic of Kazakhstan (RoK).

KPO has been submitting the EITI reports to the RoK authorised bodies since 2014. In previous years KPO Parent Companies reported on behalf of KPO. In line with the procedure on preparation of the EITI report issued in January 2015, the latest KPO report 2014 was provided to the Committee for Geology and Subsoil Use of the RoK Ministry of Investments and Development and to the RoK Ministry of Energy on 12 May 2015.

Submission by Subsoil Users of the EITI Reports has been carried out through the web portal of the integrated information system of the Single National Management System of Subsoil Users in Kazakhstan. The Final EITI National Reports are available online to any stakeholder on the website of the Ministry of Investments and Development at http://geology.gov.kz/en/ipdo-1/otchety.

According to the 10th National Report on Implementation of the Extractive Industries Transparency Initiative (EITI) for 2014, KPO paid taxes in the amount totalling USD 2.1 bln (at the RoK National bank exchange rate on 31.12.2015) to the budget of the Republic of Kazakhstan. At the moment of publication of this Sustainability Report, the EITI National Report for 2015 was at the stage of preparation.

Owing to the EITI reporting mechanism, information about taxes paid by KPO to the state budget is now publicly available at http://egsu.energo.gov.kz in section 'Final Report on tax and non-tax payments/incomings from payers of oil&gas and mining sectors of the Republic of Kazakhstan'.

ETHICAL CONDUCT

Code of Conduct

The KPO Compliance Framework regulates and provides guidance on all aspects of Compliance throughout the Company and sets 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, both internally and when contracting with vendors, suppliers or other sub-contractors.

The Code of Conduct was most recently updated in February 2015.

The detailed description of the Compliance Framework structure and roles was given in the 2014 Sustainability Report, pp. 27-28, and this remains current.

Code of conduct and anti-corruption awareness and training

Providing training on ethical norms and standards to personnel is important for international companies due to the multinational nature of their staff. All KPO new starters must complete an introductory training course on the Code of Conduct. The objective is to ensure that all KPO employees are aware of KPO's expected standards of behaviour and their personal obligations under the Code of Conduct.

The Code of Conduct and other ethical compliance policies are available on the KPO intranet for each employee to read. To facilitate ongoing awareness of their personal compliance obligations, all KPO employees are required, on an annual basis, to make a Compliance Declaration acknowledging their familiarisation with 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 December 2015, over 95% of KPO employees had completed their Compliance Declaration.

Last year KPO also introduced online ethical compliance training modules for all KPO employees. These modules focus on the Code of Conduct, conflicts of interest and anti-corruption.

Since 2013 KPO has been organising ethical compliance training for contractor companies. The 2015 Contractor Ethical Compliance Annual Workshop was held in September. The Workshop was attended by 20 senior contractor representatives from 13 of our contractors, a mix of major contractors and smaller local contractors. Presentations were given on anti-corruption laws and also on KPO's Code of Conduct and ethical compliance standards.

KPO insists on creating a fair and equitable business environment where the ethical business principles in the KPO Code of Conduct are the foundation for all its relationships.

Hotline and other compliance measures

A toll-free, anonymous and confidential Hotline has been functioning in KPO since 2012 as another step in the Company's legal compliance programme. For KPO the Hotline is administered by a leading accredited international supplier of this service – NAVEX Global.

Available 24-hours a day the Hotline provides a means for employees, contractors and other stakeholders to report potential legal or ethical offences, including discrimination, sexual harassment, conflicts of interest, safety or environmental violations and/or improper financial practices or bribery. The caller can make their report of the alleged misconduct either by telephone or by completing an online report form. The report is then sent to the KPO Legal Compliance Counsel and Compliance Coordination Manager for review and to determine the appropriate action.

During 2015, KPO received 18 reports on the Hotline and a further 7 reports directly to the Legal Directorate. All of the reports were duly considered and the appropriate action taken. The complaints mostly 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 allegations of ethical misconduct were investigated in terms of the Compliance Assurance Investigations Guidelines and the reports were provided to the KPO Compliance Committee.

The Hotline provides an important tool for KPO's employees, contractors and stakeholders to ensure a fair and safe working environment.

The Legal Directorate also maintains a set of compliance registers, including for example, hospitality and travel provided to non-KPO persons, thefts of KPO property, corporate gifts and hospitality received by KPO personnel, and allegations of corruption.

Anti-corruption due diligence process

KPO has to comply with both Kazakh laws combatting corruption and bribery as well as corresponding international laws which are applicable in the home countries of our parent companies.

In this regard, KPO seeks assurance that all its business partners – suppliers, vendors, contractors, service providers and other contract counterparties, are acceptable from an ethical compliance perspective and agree to adhere to ethical business practices.

One aspect of this assurance process is to "know our business partners".

KPO has implemented an Ethical Due Diligence programme to determine the risks associated with each potential business partner and to identify appropriate mitigation measures for those aspects that may pose a risk. A questionnaire is sent to each potential business partner requesting information about its ownership, management and conduct of business including its ethical business practices. KPO also uses international compliance and other databases to confirm the company's corporate information and whether there are any negative reports regarding its business conduct. A risk assessment is then performed to determine the acceptability of the business partner and, if relevant, mitigation measures to be applied to any residual risks.

For existing and ongoing business partners the ethical due diligence is refreshed regularly so that necessary steps can be taken to address any material change in the risk evaluation.

In 2015 KPO reviewed its Ethical Due Diligence Procedure to ensure it remained up to date and to incorporate improvements that had been identified since it was last issued. These included reducing the period for refreshing ethical due diligence from three to two years.

KPO also requires its business partners to comply with applicable Kazakh and international laws combatting corruption and bribery through obligations incorporated in KPO's standard contracts.

KPO offers assistance to local companies to comply with KPO's ethical requirements. The Contracts & Procurement Department provides local companies with pro-forma documentation, through which they are able to draft their own Code of Conduct and update their contractual documents, including those that may be used for subcontracting services or for the procurement of equipment or materials, to conform to KPO's standards.

KPO is confident that these activities have alerted our business partners to KPO's high standards of ethical business. We cooperate with and support our business partners to prevent corruption and bribery.

SAFETY

TABLE №4 **Targets in safety**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
Conduct a surveillance audit in 2015	YES	Surveillance Audit for ISO 14001:2004 and OHSAS 18001:2007 was conducted in 2015.	Surveillance Audit for ISO 14001:2015 and OHSAS 18001:2007 will be conducted in June 2016.
Provide support in facilitating Major Accident Hazards / Asset Integrity Workshop for the PSA and KPO management in Spadeadam, UK	YES	Relevant support was provided to PSA and KPO management in facilitating MAH/AI workshop in Spadeadam, UK.	
Facilitate the development and approval of Field Safety Case and Well Operations Safety Case	YES	Well Operations Safety Case document was issued for final acceptance by Well Operations. Field Safety Case was finalised and issued.	
Facilitate an update of Wells Declaration of Safety for Industrial Units (DSIU) to account a new RMS-Y project	YES	Wells DSIU was reviewed and approved internally. After approval the Wells DSIU underwent expertise and submission to the RoK Authority with endorsement and registration in January 2016.	
Continue technical safety support to KPO departments on the following projects: ■ Unit 2 Gas Injection Upgrade; ■ Well 703 Work-over; ■ KPC Water Handling; ■ KPC 2nd Knock Out Drum; ■ KPC Fuel Gas Polishing.	YES	Technical safety support was rendered to the stakeholders in progressing the following enhancement projects: ■ Unit 2 Gas Injection Upgrade; ■ Well 703 Work-over; ■ KPC Water Handling; ■ KPC 2nd Knock Out Drum; ■ KPC Fuel Gas Polishing.	Continue to provide technical safety support for the following projects: ■ 4th Gas Re-injection Compressor at Unit 2; ■ Karachaganak Expansion Project (KEP); ■ KPC Additional Flare and Segregated Maintenance; ■ KGDBN Project.

Table № 4 continued

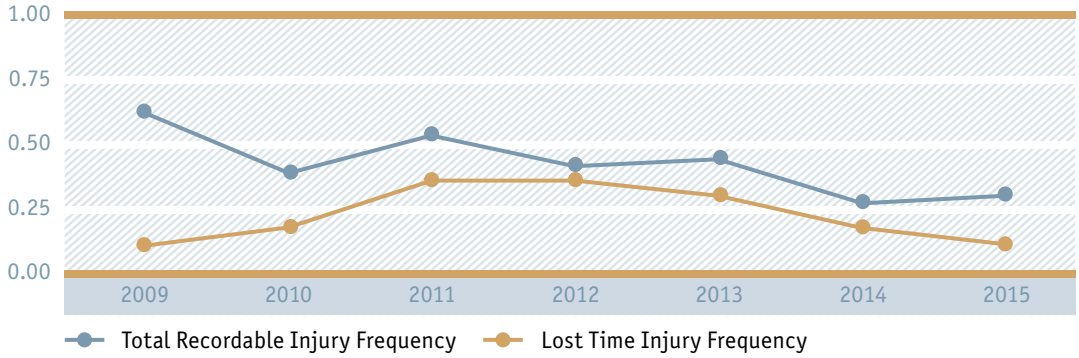
Continue development and implementation of HSE Competency Enhancement Program for line supervisors	ONGOING	Assessment guideline and program developed as well as assessment support pack. 278 Supervisors were identified to be Assessed in HSE Competence. Assessment was started in November 2015 and planned to be completed by end of April 2016.	Continue implementation of HSE Competency Enhancement Program for line supervisors and integrate it with Operations Competence Management System
Monitor and improve Contractor HSE Performance to ensure all works performed safely and higher HSE performance indicators achieved	ONGOING	A number of contractor engagement activities were held to review the Contractor HSE Performance Management Strategy including feedbacks, recommendations from contract owners and user departments. More tools planned to be developed such as gap analysis aiming at delivering a practical functioning consistent approach to assessing and recording Contractor HSE Performance and initiating changes in their HSE performance, as required.	Update and issue the improved Contractor HSE Performance Management Strategy to align with IOGP and implement improvements on certain key areas depending on the gap analysis.
■ Hold one major Contractor HSE Forum; ■ Follow up results for implementation of Contractors HSE Competency Enhancement Program for supervisors	YES	■ The Contractor HSE Forum with engagement of senior management from some 30 high risk contractors was held on 10 July 2015. The HSE Competency Assessment Guideline model was provided to contractors; ■ Throughout 2014-2015, the contracting organisations conducted HSE Competency Assessment of their Supervisors in 10 key critical areas.	Hold one major Contractor HSE Forum
Continue implementation of safety enhancement projects resulted from Karachaganak Field Wide H2S emergency response study planned in 2015	ONGOING	Temporary POB Control System was installed and commissioned at KPC, Unit 2 and Unit 3 main gates and Red Zone entrances using fixed and handheld readers. This system utilizes data from Electronic Access Control System (EACS) to detect the ID badges, identify their owners and transfer to online POB reports. The system is to be used during emergency situations for identification of the number of people at units and red zones.	Complete the trial of the permanent electronic POB system, which utilises GPS (satellite) technology run by KPO Operations HSE
■ Implement Minimum Manning Strategy within the field; ■ Coordinate the Field Administration Building (FAB) and Pilot Camp personnel relocation to Aksai	ONGOING	Relocation of personnel identified as part of the pilot scheme from the Field Administration Building (FAB) to the offices in Aksai took place in mid-November.	Continue implementation of the Minimum Manning Strategy

Safety Performance

This Section details overall KPO Safety performance review in 2009-2015. The graph № 1 shows the Lost Time Injury Frequency (LTIF) and Total Recordable Injury Frequency (TRIF) in KPO.

In 2015, LTIF was 0.11 (versus 0.20 in 2014) and TRIF – 0.30 (versus 0.27 in 2014).

GRAPH №1 **LTI Frequency and TRI Frequency: KPO and Contractors**



The following method is applied in KPO for calculation of LTI and TRI frequencies:

- *LTI Frequency (LTIF) = Number of LTIs (Lost Work Day Case + Fatality) x 1,000,000/man-hours;*
- *TRI Frequency (TRIF) = Number of TRIs (Lost Time Injury + Medical Treatment Case + Restricted Work Day Case) x 1,000,000/man-hours.*

Table № 5 shows KPO LTIF versus contractors LTIF. It should be noted that tables separately presenting data of KPO and contracting organizations may not be added together to get a joint number, but a formula is to be applied.

TABLE №5 **Lost Time Injury Frequency – KPO versus contractors**

Performance Indicators	2009	2010	2011	2012	2013	2014	2015
Lost Time Injury Frequency (KPO)	0.21	0.00	0.71	0.42	0.58	0.14	0.14
Lost Time Injury Frequency (Contractors)	0.10	0.23	0.21	0.30	0.17	0.22	0.10

Table № 6 shows KPO TRIF versus contractors' TRIF.

TABLE №6 **Total Recordable Injury Frequency – KPO versus contractors***

Performance Indicators	2009	2010	2011	2012	2013	2014	2015
Total Recordable Injury Frequency (KPO)	0.43	0.11	1.00	0.42	0.58	0.14	0.27
Total Recordable Injury Frequency (Contractors)	0.69	0.47	0.36	0.36	0.41	0.32	0.31

** Note: First Aid Cases are not included in occupational injury calculations.*

KPO's objective is for no one to be injured at work. However, during 2015 there were 8 people injured. There were 3 Lost Time Injuries (Lost Work Day Cases), which involved a slip on ice, a fall from height and chemical splash to the face. The other 5 recordable incidents involved minor injury to personnel resulting in medical treatment or restricted working (light duties) – examples are cut finger, sprained knee, bruising from fall on ice. Of the 8 injuries, 6 injures were to contractor employees and 2 injuries to KPO employees.

Road Traffic Incident Frequency (RTIF) per mln kilometres driven decreased from 0.10 in 2014 to 0.03 in 2015.

Although there continues to be a number of very minor road traffic incidents (RTI's), such as scratches / bumps, only 2 reportable RTI's occurred in 2015 – a vehicle collision and another vehicle that went off the road fell onto its side. One incident involved the need for medical first aid.

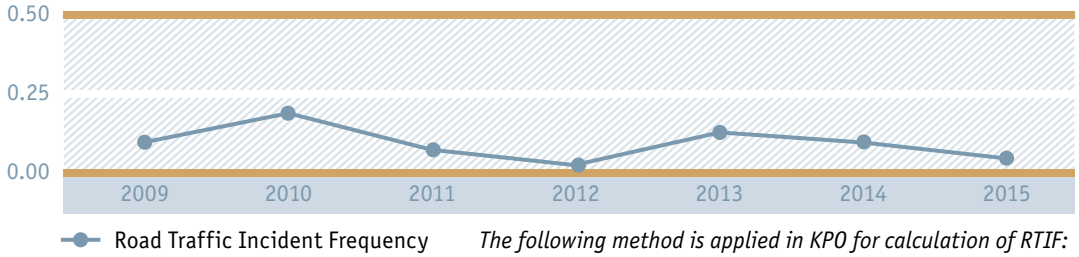
In 2015, KPO vehicles travelled a total of 60 mln kilometres.

Each year KPO compares HSE performance with other oil & gas production operators. KPO HSE Key Performance Indicators (KPIs) are compared to statistical data reported by the International Association of Oil and Gas Producers (IOGP) data from many worldwide exploration and production operators.

The number of Lost Time injuries in KPO again decreased in 2015 and when compared to other operators remains below the IOGP average (as shown in Graph № 3). Details of the IOGP statistical average indicators, top 10 OGP and № 1 OGP indicators are available online on the IOGP website www.iogp.org.

GRAPH №2

Road Traffic Incident Frequency: KPO and contractors



The following method is applied in KPO for calculation of RTIF:

- *Road Traffic Incident Frequency = Number of RTI (recordable) x 1,000,000/kilometres driven.*

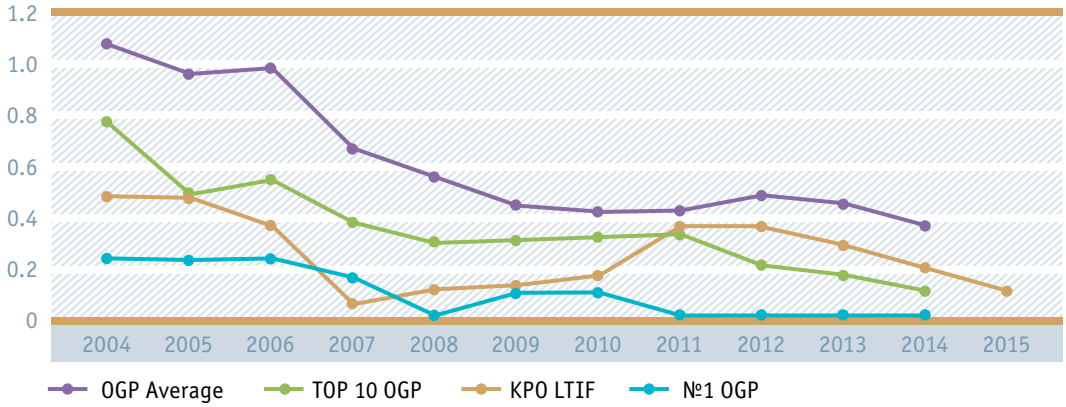
TABLE №7

Road Traffic Incident Frequency: KPO versus contractors

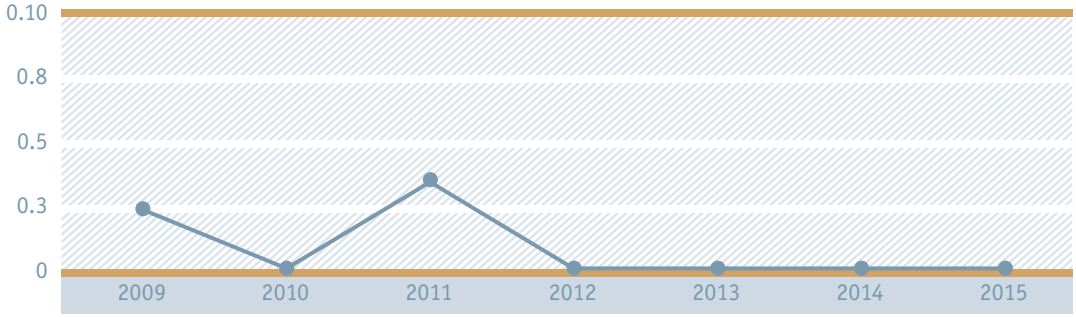
Performance Indicators	2009	2010	2011	2012	2013	2014	2015
Road Traffic Incident Frequency (KPO)	0.12	0.13	0.00	0.00	0.00	0.00	0.25
Road Traffic Incident Frequency (Contractors)	0.03	0.09	0.02	0.00	0.14	0.10	0.02

GRAPH №3

KPO Performance vs IOGP



GRAPH №4 **Fatality Frequency: KPO and contractors**



The following method is applied in KPO for calculation of fatality frequency:

- *Fatality frequency (per mln man-hours worked) = Number of fatalities x 1,000,000 / man-hours worked. KPO had 1 Fatality in 2009 and 1 fatality in 2011.*

TABLE №8 **Fatality Frequency: KPO versus contractors**

Performance Indicators	2009	2010	2011	2012	2013	2014	2015
Fatality Frequency (KPO)	0.00	0.00	0.14	0.00	0.00	0.00	0.00
Fatality Frequency (Contractors)	0.03	0.00	0.00	0.00	0.00	0.00	0.00

2015 HSE Improvement Plan

The 2015 HSE Improvement Plan consisted of 48 key actions and improvements distributed and shared throughout all company Directorates. 87% of was plan was implemented. The core activities done during the year 2015 are summarized below:

I. Compliance with HSE Management System

To improve the field site HSE inductions, the induction packages existing at the units were revised with application of a more standardized approach. The new standardized inductions were launched at all KPO units.

KPO Standard for emergency signs was reviewed, design of emergency safety signs and evacuation marking was defined, and the new emergency signs were manufactured and are being installed at all KPO facilities.

II. HSE Leadership & Supervision

The KPO Line Supervisors HSE Competency Enhancement programme has been continued in 2015. Assessment materials were prepared focusing on 10 Key HSE critical areas:

1. HSE leadership and behaviour,
2. HSE risk management,
3. Safe systems of work,
4. Emergency response,
5. Incident and Near Miss investigation & reporting,
6. HSE inspections and audits,
7. Environmental controls,
8. Health & hygiene management,
9. Sub-contractor management,
10. Life Savers & other company rules.

HSE Competence assessments started in November and completed in the first quarter of 2016. The assessments will identify the level of competence of supervisors, and individual programmes will be further developed for each supervisor to address any competence gaps found.

KPO Contractor LLP "Elzhas" received an award for "Best Contractor HSE Performance"

Following the online survey results, KPO Management took a commitment to address improvement of efficiency of the HSE Leadership tours. The HSE Leadership tour programme was split into two distinct programmes:

1. HSE Leadership tours for Level 0 & 1 (Directors / Controllers);

2. HSE Management Tours for Level 2 & 3 (Managers).

Delivery of the "KPO in Safety" Programme to all KPO personnel continued in 2015. High HSE risk contractors' management were also provided with the "KPO in Safety" programme material to enable cascading to their company personnel.

III. Contractor HSE Management

A Contractor "HSE management process" audit was done by Safety & Asset Integrity department in 2015. This audit involved KPO departments who have "high and medium HSE risk" contracts together with Contracts & Procurement department personnel. The audit was to review each stage of the contractor HSE management and check the strategy implementation. The audit identified some areas for improvement, such as: the process of feedback provision, HSE performance measurement criteria and HSE requirements at pre-qualification tender stages.

Contractor "Supervisors HSE Competence" system review was performed by conducting individual visits to high HSE risk contractor companies. These were visits to 22 companies that committed to assess the HSE competence of their Supervisors in 2014. Corporate Safety department developed and issued a 'Contractor HSE Competence Assessment Guideline' to help contractors' management perform their assessment of line supervisors. All the companies included into the programme performed their assessments based on the KPO recommendations or by aligning their own HSE Competency system to the HSE critical elements identified by KPO. Contractor companies assessed a total of 411 Supervisors on 10 key HSE competencies. The results were announced during the 2015 Contractor HSE forum and the contractor organisations good work formally recognised by KPO Management with awards.

IV. Asset Integrity & Risk Management

To reduce personnel exposure to any major accident hazards in the field, the pilot phase of the Minimum Manning philosophy for personnel based in the Field Administration Building (FAB) was implemented. 66 people were relocated from the Field Administration Building (FAB) to Aksai in 2015. Once all identified personnel from FAB are relocated to Aksai offices, the second phase is scheduled to take place to relocate essential personnel from the Field facilities to FAB.

As a part of the initiative to improve the communication of Safety cases, more user-friendly "condensed Safety cases" booklets for Unit 2, Unit 3 and KPC were developed and issued in 2015. The rollout processes were started with cascading of booklets to units' personnel as a part of site inductions.

Asset Integrity Management Framework (AIMF) was finalised and established in 2015. The AIM Framework is a high level document to govern Asset Integrity across all KPO assets. AIMF provides an integrated and structured approach in support of the delivery of safe and sustainable operating performance. This approach is applied at each stage of the life-cycle whether in design or construction of the facility or within its operation or decommissioning. Several rollout sessions were conducted to familiarise the specialist personnel on process requirements for Asset Integrity Management.

As a part of the AIMF, the Barrier Model for operational units, such as Unit 2, Unit 3, KPC, and Gathering was established to identify "barriers" to a major

accident occurrence. A Barrier Model encompasses issues from all KPO facilities to provide a coherent risk-oriented analysis of the plant status. Barrier Management includes the processes, systems, solutions and measures that are needed to be in place to ensure achievement of the requisite risk control and reduction.

Detailed approach and progress in this area during the year 2015 is described in the Asset Integrity section of this Report.

V. Occupational Health

In order to improve the current practice of occupational hygiene monitoring to the higher standard, the Industrial Hygiene programme was reviewed and updated to include international exposure limits for comparison. Besides, the local standards used by KPO were found to be stricter than the international ones. Details about KPO Health programmes can be found in the part of section titled "Protection of Health".

VI. Environmental Management

In 2015 KPO EMS Controllership conducted explanatory sessions on "Liability for violations in the area of environmental legislation and subsoil use" for the KPO operations departments. One of the main objectives of the sessions was to provide clarification and support to the production departments on compliance with the new standards and requirements of the RoK legislation related to environmental protection.

Environmental aspects registers for KPO units and departments were developed according to the KPO procedure using the Environment department risk assessment and uploaded on KPO intranet for internal use. Moreover, in 2015 31 Environmental Aspects Registers for contractor companies were concurred and approved by KPO contract holders.

As per the requirements of the RoK law "On Energy Saving and Energy Efficiency Improvement", the Energy Audit (Assessment) was conducted at KPO in 2015. Energy saving from activities approved for further implementation in the period 2016-2020 is set at 4% versus the total energy consumption. More details can be found in the Energy section of this Report.

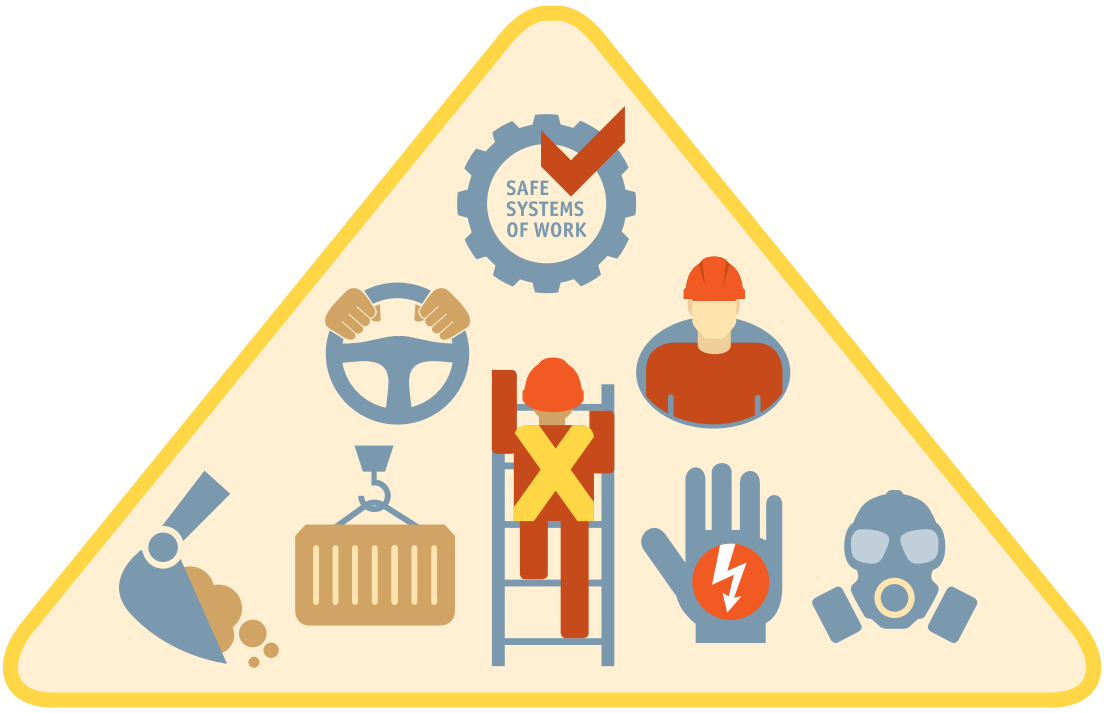
According to the survey Programme on "Finding ways on further use of fertile soil layer of storage piles", the reports on inventory, survey and topographic mapping of down stocked fertile soil layer (FSL) location areas in the Atyrau Terminal OPS area (Atyrau oblast) and KPO facilities in the KOGCF and Bolshoi Chagan OPS areas (West Kazakhstan oblast) were developed and approved by KPO in 2015.

VII. Road Safety Management

In 2015 the Road safety improvement plan which included drivers' safety incentive scheme, improved driver awareness assessment, review and update of procedures and other activities was implemented. 80% of the targeted actions were completed.

VIII. Project HSE Management

Concept Selection Phase of the project KEP 1 is ongoing. All actions planned for implementation in 2015 will be continued in 2016 during the FEED phase.



2016 HSE Improvement Plan

The annual HSE Improvement Plan, developed since 2011, is aimed at continuous improvement and sets a list of actions that are over and above the day-to-day business activities. The Plan is based on the lessons learned from the previous period and the introduction of international best practices.

In view with the long-term nature of KPO initiatives, the Plan's overall structure does not change significantly. However, each year some new elements are added depending on emerging issues identified while implementing the previous Plan. Each element is actioned by relevant KPO divisions depending on their role in the company-wide projects. The progress of the HSE Improvement Plan is monitored and reported on a monthly basis to KPO senior management and Parent Companies.

A Security element was added into the 2016 KPO HSE Improvement Plan including the following:

1. Compliance with HSE Management system,
2. HSE Leadership and Supervision,
3. Contractor HSE Management,
4. Asset Integrity & Risk Management,
5. Occupational Health,
6. Environmental Management,
7. Road Safety Management,
8. Project HSE Management,
9. Security.

HSE Engagement and Communication

HSE meetings are regularly held at various levels in the company to discuss HSE topics and concerns and to share lessons learnt from incidents investigation. We engage our contractors in various meetings and discussions related to HSE.

On 10th July 2015 KPO held an HSE Forum with Senior Management from the high HSE Risk contractor organisations. Representatives from about 30 national and foreign Contractor Companies took part in the forum. The theme of this forum was "The role of Leaders in Evolving Effective Safety Culture".

The "KPO in Safety" Cascade programme was presented to all forum attendees. This is part of a safety behaviours change programme and contractor organisation senior management were asked to cascade this programme to all their employees.

At the forum both KPO and Contractor Companies had the opportunity to engage in HSE Leadership discussion groups in an effort to understand dilemmas of HSE Leadership and suggest recommendations to evolve an effective safety culture. A "Dialogue map" was developed and utilised for this exercise.

The main goal of the dialogue map was to enable fruitful discussion and share ideas about the role of Leader in developing and maintaining effective safety culture inside and outside of organisations.

With the aim to initiate a long term cultural change "KPO in Safety" was successfully cascaded within KPO departments and Contractor employees. This project comes from the very top of the organization and carries key message directly from the Top Management.

In 2015 two Safety Stand Downs were conducted (in April and in October) at all working locations and production facilities, led by the Company's Directors and top management and engaging over 3,000 Company and Contractor personnel to stop, think and discuss altogether the importance of everyone's involvement in safety, reminding of major hazards and changing the behaviour and safety culture.

HSE Leadership and Management Tours programmes have been set for all KPO Management to be visible in the workplace and interact with the workforce, to monitor overall HSE performance and coordinate action to continuous improvement in line with KPO Policy, regulatory requirements and industry best practice. The number of HSE Leadership Tours in 2015 exceeded the minimum target set for the year: 40 Leadership Tours were conducted by Directors and Controllers against the planned 30. As well as the HSE Management Tours held by facility and department managers: 405 tours were conducted against the planned 300 (the estimate was made assuming that one tour corresponds to one person's visit to a location).

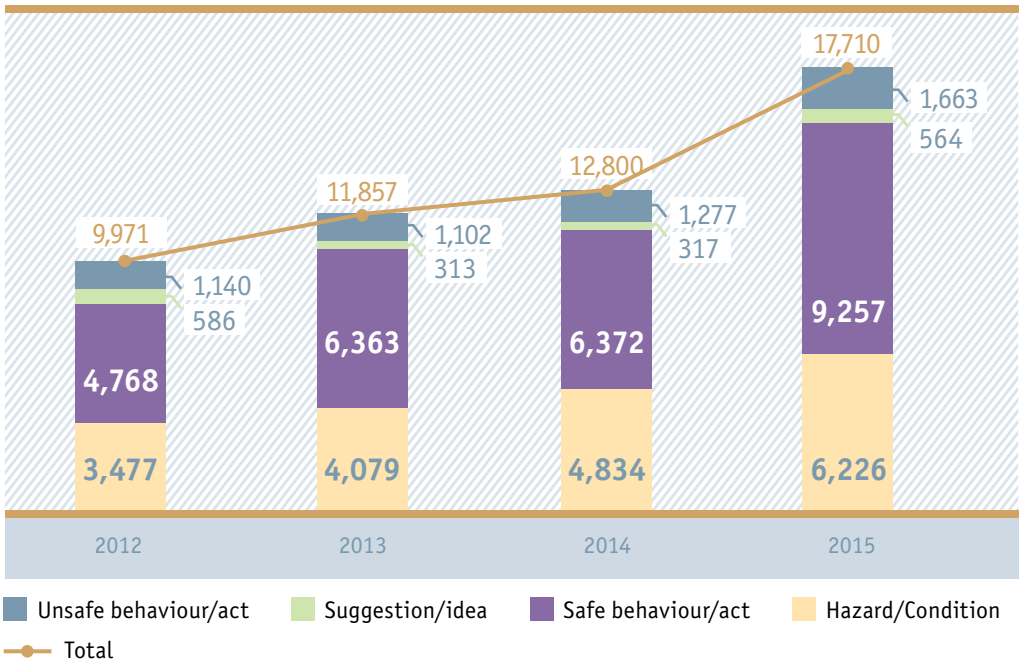
HSE Cards Programme

HSE Cards Programme has been successfully functioning at KPO since 2012. The principle of the HSE card is to provide feedback on safe/unsafe behaviour, potential hazards or initiate improving proposals in HSE areas by an employee, contractor or visitor. HSE card is available both in hard copy and online.

In 2015, 17,710 cards were completed by KPO and contractor personnel and processed, out of those 1,966 cards were submitted in electronic form. 49 KPO contractor organizations actively participated in this Programme and contributed 47% of all the observations. From the HSE cards observations submitted, 8,216

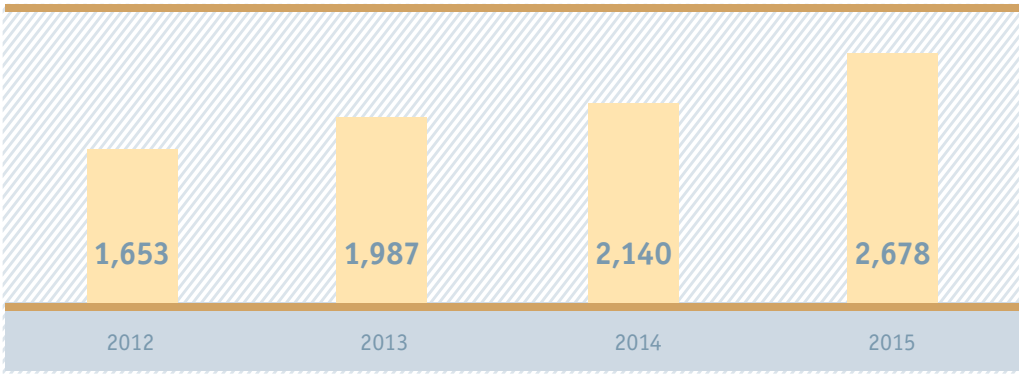
GRAPH №5

Analysis of HSE Cards by type of observations, 2012-2015



GRAPH №6

Personnel engagement in the HSE Card Programme, 2012-2015



Note: Minor difference in annual HSE cards quantities for the past 2015 and the previous periods is explained with the 2015 revision of the cards' selection mode from the Synergy database. Previously used selection by observation date was changed to the selection by registration date, as some HSE cards get registered after their submission date. Additionally, as part of the regular quality control check and lessons learned, the database is periodically updated in result of some HSE cards' deletion or their classification change.

of the 8,452 corrective actions registered were implemented (97%). The consistent increase in number of observations from year to year mainly results from the increased personnel involvement into the HSE Card Programme proved by the number of new observers growing each year due to continuous promotion of the observation programme by the HSE Card Committees and the Company management. Graph № 6 demonstrates the number of observers who submitted HSE Cards during 2012-2015.

The HSE Cards Programme has been actively promoted throughout the year both by HSE teams and Company management in order to raise employees' awareness and improve the programme.

There are 12 HSE Cards Committees in the Karachaganak field and at remote locations. These committees work to progress corrective actions raised and improve the process of observations. There were 86 HSE Card Committee meetings held and 146 additional actions/ initiatives were introduced based on cards with 121 actions already completed. More than 500 new observers from the work force were trained.

Encouraging the work force to think about safety and participate in the HSE Card scheme is very important. The HSE cards Incentive Scheme programme has been developed to promote participation and involvement. Over 500 KPO and Contractor employees received promotional gifts such as 'Dinner for Winner' incentive as encouragement for active participation in the HSE Card Programme. Some 40 KPO employees were rewarded with monetary prizes or for the best observations upon the quarterly results.

The graph № 5 shows considerable increase in number of observations made by KPO personnel and contractors in 2015 with more than 6 observations per person per annum on average.

Statistics result of the increased engagement of personnel is given in graph № 6.

EMERGENCY MANAGEMENT

KPO is responsible to ensure personnel are prepared to respond to any potential emergency in the short and the long term. It is also important to monitor the Company's effectiveness in implementing business contingency planning.

KPO operates an Emergency Response (ER) system which uses 3 levels of Emergency Response. This is to ensure clear command and control at the right level during an incident. KPO annually holds specific training throughout the year.

As part of 2015 Training and Exercise Plan for Level II-III Emergency Response, the following exercises were conducted:

- Command and control exercise that involved all levels of the KPO ER Organisation and Crisis Management Team (CMT) in the "Operator Companies" (exercise KAISER);
- A seminar-style table-top exercise between level II and III related to a bomb threat (exercise LEONID).

Weekly table top exercises have been put in place to brainstorm various scenarios with Aksai and Field Incident Management Teams.

ASSET INTEGRITY MANAGEMENT

TABLE №9 **Targets in Asset Integrity**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
Implement Barrier Model and Operational Risk Assessment for the assets, and relevant integrity improvement plan	YES	Barrier model was implemented for KPC, Unit-2, Unit-3 and Infield Gathering.	Further work on refining the Barrier model and extending it to export pipelines and Eco Centre. Establish a process for management and monitoring soft barriers.
Conduct an Independent Verification to confirm Unit 3 status	YES	An expert review and validation of the status and forward plan for Unit-3 was conducted by Fabricom Engineering Solutions (CFES). The outcome of this review will be considered in the future Field Development planning activities.	
	NEW TARGET		Continue implementation of the process for independent verification of Asset Integrity barriers and associated safety critical elements
Arrange quarterly meetings of Asset Integrity Management Committees	YES	Asset Integrity Management Committee was established. As of August 2015, Quarterly committee meetings started with two held in 2015.	Hold quarterly meetings on completion of reporting of quarterly asset integrity performance data
Continue to refine the RBI and inspection programs to further reduce the LOPC events	YES	Risk based inspections are an ongoing activity within the P&M inspection and maintenance programme. Number of losses of primary containment was within the limits established in the key performance indicators and remained stable against 2014 statistics.	
	NEW TARGET		Introduce the methodology for monitoring of Integrity Operating Window.
	NEW TARGET		Further develop and incorporate the requirements Asset Integrity Management framework in the Projects Value Assurance Process.

Assurance of the active and robust management of the functional, mechanical, and operational integrity of KPO production facilities remained the main focus area of the Asset Integrity Department in 2015.

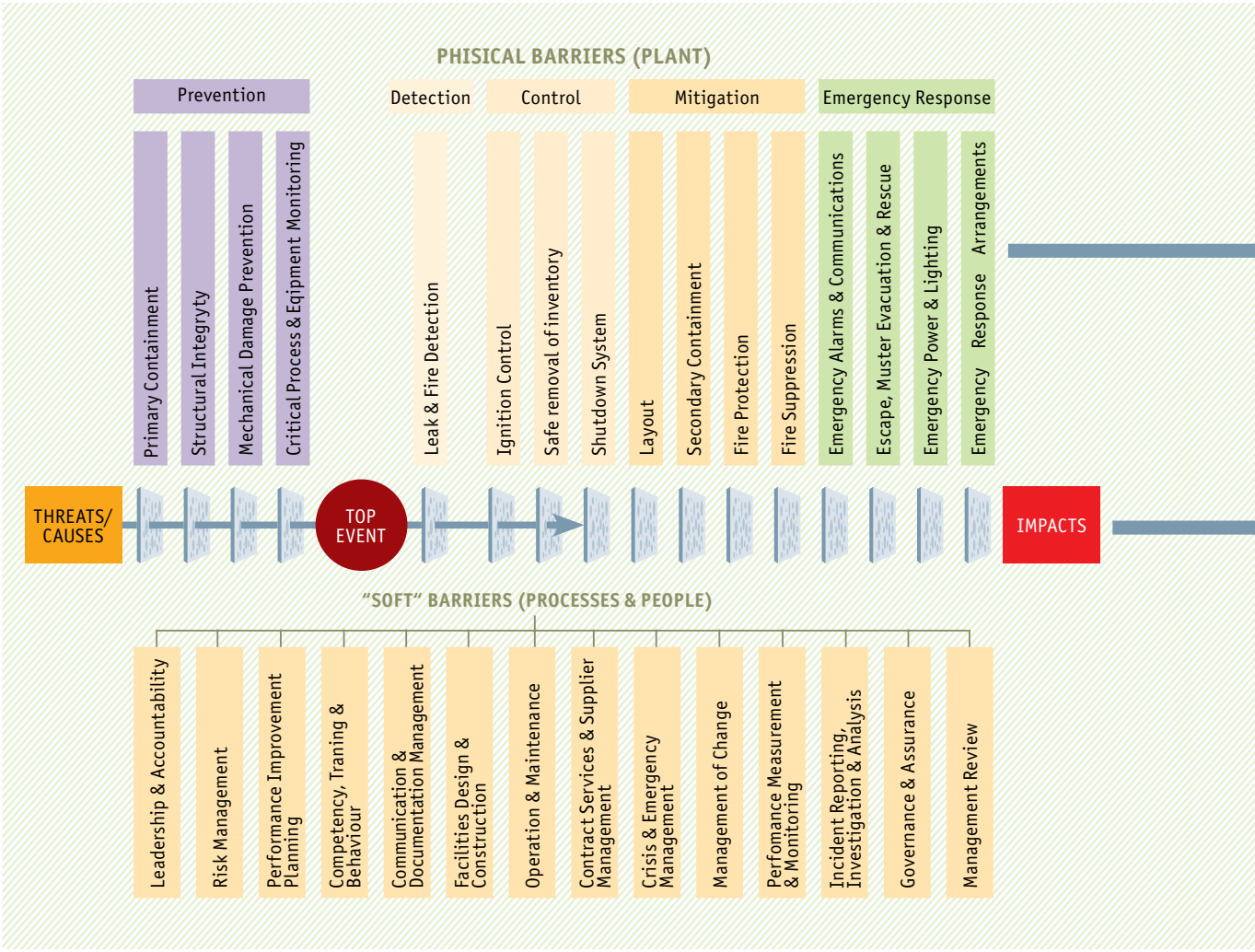
The Asset Integrity Management Framework (AIMF) was finalised, implemented and established in 2015. The document is a high level KPO document to govern Asset Integrity on all KPO assets. AIMF is an integrated and structured approach to support the delivery of safe and sustainable operating performance. It applies at each stage of the life-cycle whether in design or construction of the facility or within its operation or decommissioning. Several rollout sessions were conducted to familiarise dedicated personnel on process requirements for Asset Integrity Management. As a part of the AIMF, the Barrier Models for operational units were established to identify "barriers" to a major accident occurrence. The Asset Integrity Barrier Model collects issues from all KPO facilities to provide a coherent high level risk-oriented analysis of plant status.

In 2015 the main efforts in improvement of Asset Integrity barriers were associated with:

1. Evolution of the Asset Integrity Barrier Model

The asset integrity barrier model introduced in 2014 has been significantly improved over the period of 2015 and it is now used as the main tool to drive the discussion and decision making in area of asset integrity risk reduction both at Field and Corporate level. The structure of the model is presented in the Pic. № 4.

PIC. №4 **Asset Integrity Barrier Model Tool (typical graphic)**



The main benefits of the tool are summarised as follows:

a. Categorises plant issues against the individual asset integrity barriers;

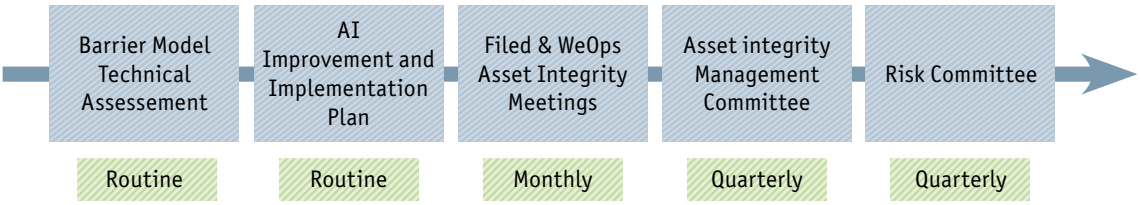
b. Risk ranks the issues and subsequently prioritises the activities based on risk;

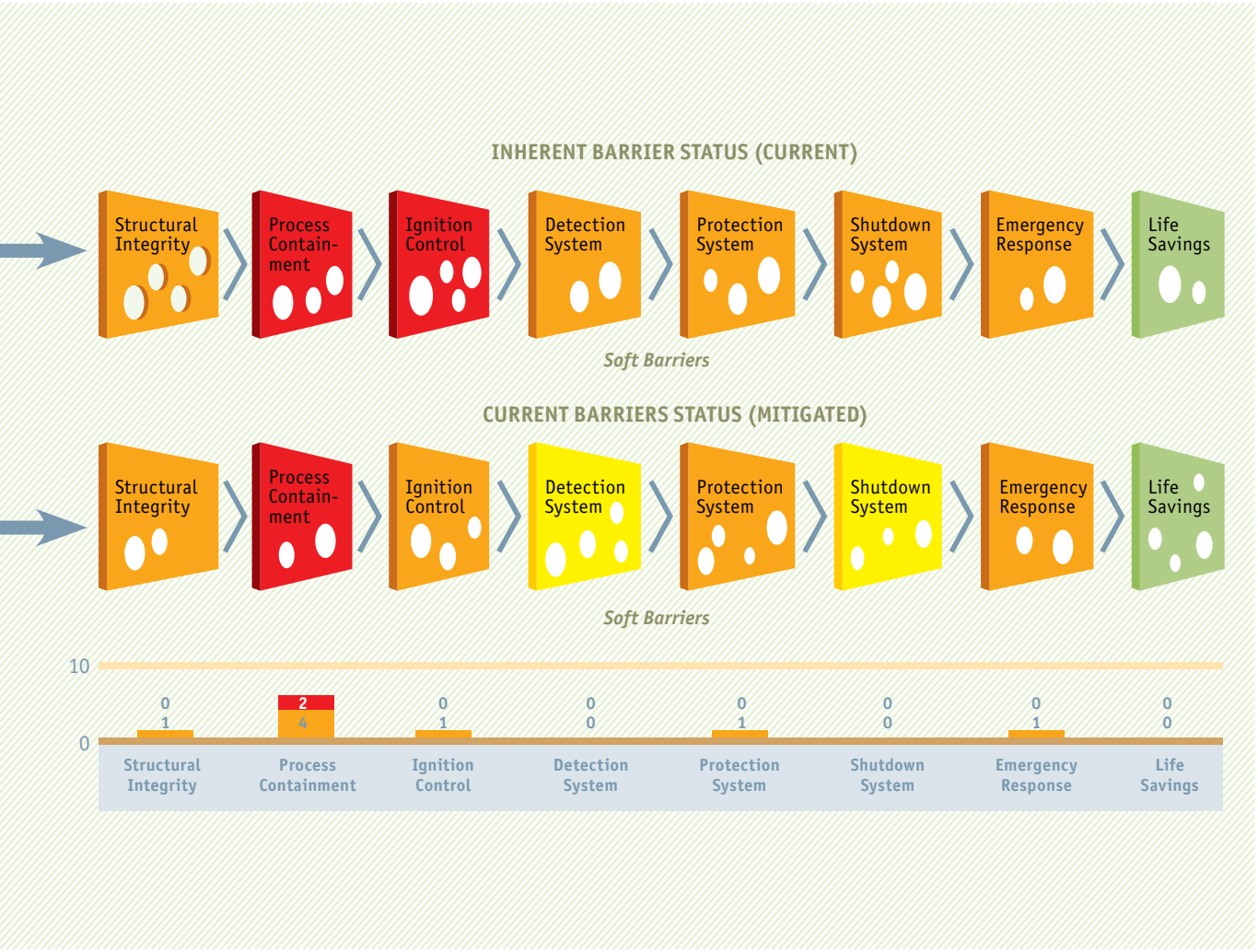
c. Provides a database for managing the risks and risk reduction measures;

d. Presents to management at both unit and corporate level a cumulative risk picture.

The barrier status reporting process is built into the organisation workflow to ensure bottom-up communication and escalation of top issues to the attention of the senior management.

PIC. №5 **Barrier status reporting in KPO organisation structure**





Further development of the barrier model tool in 2016 will include the following activities:

a. Implementing an area based model to enable barrier management at the level of individual process areas within a facility. This would allow using of the barrier model as a tool for daily operational risk assessment of plant conditions on a continuous basis;

b. Revising the safety critical equipment inventory contained in the SAP Computerised Maintenance Management System (CMMS) and Asset Condition Evaluation Tool (ACET) for RBI databases and rationalising the need for maintenance and inspection to only include activities that are needed to ensure barriers are and stay effective;

c. Understanding of gradual aging and deterioration of plant and the effect this has on plant capacity (compared to Integrity Operating Window – AP 1584);

d. Establish the process for monitoring the effectiveness of soft barriers (management processes and people influencing the integrity of the plant);

e. Extend the Model application to export pipeline systems and Eco Centre.

2. Monitoring of Asset Integrity Performance

The efficiency of barriers' performance is monitored via leading and lagging key performance indicators. Both sets are monitored on a monthly basis through the Asset Integrity Scorecard and reviewed by senior management at the quarterly Asset Integrity Committee meetings. The analysis of key performance indicators performed in 2015 has identified some key areas which will require attention also in 2016, e.g.:

Leading Indicators	Lagging Indicators
Timely execution of Safety Critical Element (SCE) preventive and corrective maintenance work orders	Demands of Safety Systems
Overrides and inhibits	Loss of Primary Containment

Management of major accident hazards, or Asset Integrity, is the key to prevent or reduce the severity of process safety events. The statistical analysis for 2014-2015 indicates no increase in the number of losses of primary containment and asset damage events. All process safety events have been investigated to determine the root causes and corrective actions. Similarly to occupational safety, reduction of the number of process safety events is a complex process which requires contribution by all KPO directorates at design/build, operate and sustain stages of the plant life-cycle. Work will continue in 2016 to address weaknesses in the management system that lead to process safety events.

GRAPH №7 **Breakdown of process safety events by type**

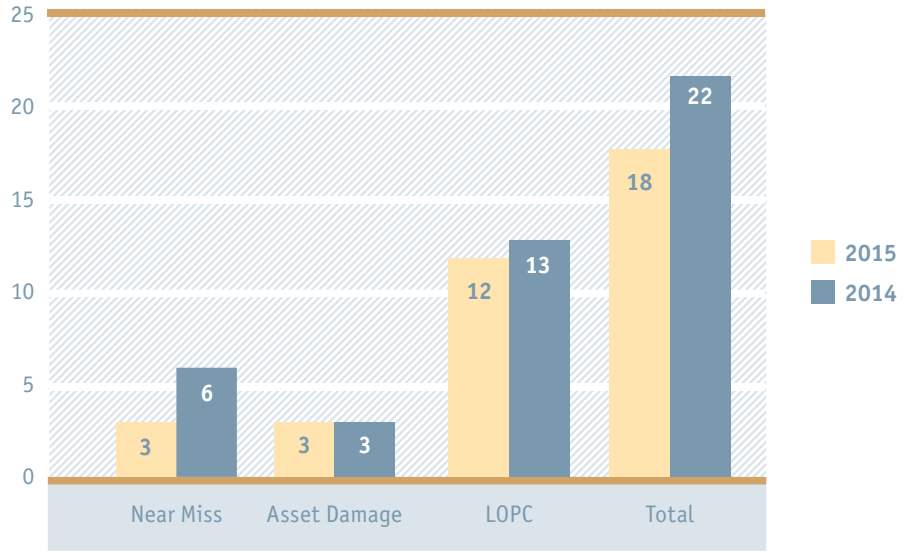


TABLE №10 **Losses of Primary Containment by process facility**

2014			
LOPC (OGP)	Tier-1	Tier-2	Tier-3
KPC	0	1	3
Unit-2	0	1	3
Unit-3	0	0	4
Gathering	0	0	1
Eco Centre	0	0	0
Total	0	2	11

2015			
LOPC (OGP)	Tier-1	Tier-2	Tier-3
KPC	0	2	5
Unit-2	0	0	2
Unit-3	0	0	1
Gathering	0	0	2
Total	0	2	10

Legend: Tier-1 refers to a number of Losses of Primary Containment events related to the process with greatest consequences;

Tier-2 refers to a number of Losses of Primary Containment events related to the process with lesser consequences;

Tier-3 refers to a number of other Losses of Primary Containment events related to the process.

3. Asset Integrity Management System

Effectiveness of soft barriers (processes and people) requires a documented management system. In 2015 an exercise was conducted to review the existing management processes, which govern asset integrity issues. The results of this review will serve as a basis for retiring processes that are no longer useful, developing new and/or revising existing processes in support of the asset integrity management framework. This also applies to the life cycle of the asset and processes for governance of Asset Integrity in the Value Assurance Review (VAR) process will be further progressed in 2016.

4. Management of Change (MOC) system for brownfield modifications

The new electronic MOC system was successfully introduced in KPO to increase the efficiency of the process, reduce bureaucratic burden on operational personnel and yet providing a comprehensive, documented process for controlling the changes to plant hardware, software, operating procedures and people. Activities in 2016 will include an upgrade of the electronic MoC tool based on the lessons learned from the first year of use and the integration of the MOC requirements in the projects value assurance framework in order to incorporate process safety, constructability, operability and maintainability requirements at the design/modification stage of plant lifecycle.

KPO management tour at the operating facilities

PROTECTION OF HEALTH

Organisations have a legal duty to put in place suitable arrangements to manage health and safety.

KPO has established an Occupational Health Management System that incorporates the minimum set of elements defined by OHSAS 18001, an international standard that describes the requirements for an occupational health and safety management system. The minimum elements include:

- a written health and safety policy;
- assessments of the risks to employees, contractors, customers, partners, and any other people who could be affected by the organisation's activities;
- arrangements for the effective planning, organisation, control, monitoring and review of the preventive and protective measures that come from risk assessment;
- access to competent health and safety advice;
- providing employees with information about the risks in your workplace and how they are protected;
- instruction and training for employees in how to deal with the risks;
- ensuring there is adequate and appropriate supervision in place;
- consulting employees about their risks at work and current preventive and protective measures.

TABLE №11 **Targets in health protection**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
■ Continue the Healthy Heart program; ■ Review and adjust individual health plans for risk group employees; ■ Focus further health promotion on hypertension, physical activity and medical screening; ■ Continue the Allen Car Stop Smoking course.	YES	■ Healthy Heart program was continued with the focus on diabetes and hypertension. Themed posters, presentations and log-on messages have been used to increase employee awareness of diabetes. ■ Food nutrition information was put on display in the Company canteens. ■ Individual health improvement plans were reviewed and follow-up continued for high cardiac risk employees. ■ Medical screening for office staff was continued. ■ Smoking cessation courses were arranged for 31 employees determined to quit. 15 of them have since quit.	■ Continue implementing the Healthy Heart programme. ■ Analyse the 3-year results of the Healthy Heart Program and review it. ■ Continue the Back pain programme; encourage employees to embrace responsibility for own health. ■ Analyse the results of medical screening to detect trends with subsequent review of existing health promotion activities.

■ Conduct a review of the 2014 Health Risk Assessments (HRAs); ■ Carry out additional HRAs for critical positions in the Field; ■ Conduct a focused HRAs for activities with high and medium risk rating.	YES	■ HRAs were conducted as planned. ■ Focused risk assessments have been carried out, including instrumental measurements, wherever necessary. ■ Personal noise dosimetry has been carried out for exposed personnel. ■ There has been a significant rise in the number of "at request" workplace assessments as a result of increased employee awareness of ergonomics.	■ Continue the annual HRA activities; review risk assessments, which are due for revision. ■ Develop a health risk register for each unit.
■ Continue compliance monitoring in 2015; expand the scope of work to include more factors (chemical hazards). ■ Purchase new equipment to upgrade sanitary laboratory's capacity.	IN PROGRESS	■ Workplace factors monitoring has been continued with greater attention to addressing non-compliance. ■ Upgrading the equipment had faced challenges due to budget and procurement issues.	■ Review the monitoring program to include benzene personal sampling. ■ Conduct Legionella risk assessment of water systems in all company facilities. Develop Legionella management plan and procedure.

Primary health care at workplaces

KPO Medical Support clinics in the Field and Aksai providing daily medical care to the Company employees are the first line of managing ill health. The definitive diagnostics and treatment of KPO personnel is outsourced by way of medical insurance. The Health department monitors and analyses sickness absence among employees. Health records are maintained with respect of medical confidentiality as a fundamental principle of patient care.

24/7 Emergency Medical Care

KPO Medical Support team provides emergency medical care to company employees from on-scene first aid to medical evacuation and repatriation through five fully equipped clinics functioning around the clock throughout the year. They have regular and all-terrain heavy ambulances equipped as resuscitation units.

TABLE №12 **Medical support indicators, 2015**

Medical Support Indicators	
Number of patients, visited clinics	1,893
Number of patients, transported to medical facilities	110
Exercises and drills participated	423
First aid training provided for Company employees	294
Pre-shift medical examinations (drivers/operators/electricians)	
№ of visits (including Alco-test)	86,321
Not FIT	15
Random Alco tests	1,243
Random tests "+"	0
Medical Support Emergency Indicators	
Number of Emergency calls	38
Average response time (KPO)	6,49 min

Remark: For example, the average response time of Emergency Response in UK and Western countries makes up 8 min.

In 2015 13 KPO doctors have been trained on Mandatory Emergency Medicine training in Astana. All feldshers's staff updated certificates, passing the Narcology Course in Uralsk. 9 feldshers passed the Emergency medicine Course in the Uralsk Medical College. The rest medical support staff is planned to pass Emergency Medicine training in 2016.

KPO Medical support section has an agreement with several hospitals in Uralsk. The contract with Orenburg Burn Injuries Treatment Centre city hospital № 4 is in process.

Management of ill health in the workforce

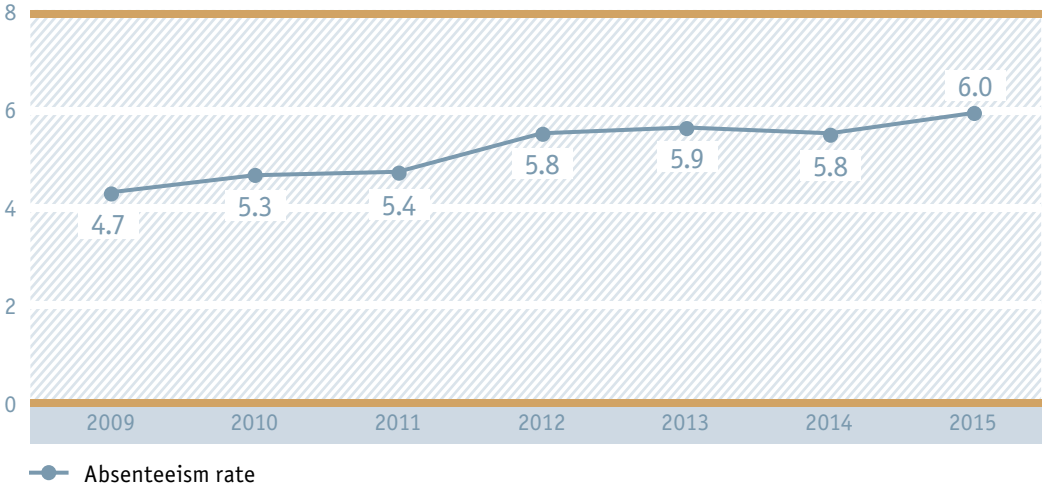
The Occupational Health Unit monitors and analyses sickness absence among employees.

The leading causes of sickness absence in KPO:

1. Respiratory diseases
2. Upper respiratory tract infections
3. Musculoskeletal disorders
4. Trauma (non-work related injuries)
5. Kidney and urinary tract disorders.

KPO employees' sickness absence situation shows a slight increase in the number of disability cases compared with the previous years.

GRAPH №8 **KPO Absenteeism rate**



The following method is applied in KPO to calculate the Absenteeism rate:

- *The absenteeism rate = actual number of days lost due to absence in the workplace (because of illness) x 100 / total quantity of workers. Data of days missed for other reasons is not available.*
- *Calculation method for absenteeism adopted in KPO is based on the number of employees (not man-hours) as required by regulatory authorities.*

Drinking water quality control and food safety

Outbreaks of food poisoning and diseases transferred through water are the substantial risks to health, production and the Company's reputation. These risks have been effectively controlled in KPO by joint efforts from several divisions: Infrastructure and Services, Catering providers, Operations, Health and others. Only one (1) sample out of 797 taken in 2015 was found to be non-compliant with the standards – a bottle of water that had been stored at a higher temperature than required.

One of the Operator's 2014 HSE audit recommendations was a review of water control procedures to include the management of legionella in hot and cold water systems. Due to the absence in Kazakhstan of internationally certified laboratories capable of carrying out risk assessments and analyzing water samples for legionella, foreign companies have been considered. The tendering process was started in 2015.

The sanitary laboratory carried out 113 food safety inspections in 2015, including 48 inspections of contractor canteens. More than 77% of corrective actions were closed, compared to 75% in 2014. Outstanding actions, in most cases, are those that require capital investments and take longer time to be implemented.

Health risk assessment (HRA)

Health Risk Assessment of Field-critical job-groups was conducted in 2015, along with focused assessments of high and medium risk activities. Line management involvement, communication and ownership of health risks have been emphasized whilst carrying out these assessments.

There has been a rise in the number of "at request" workplace assessments as a result of increased employee awareness of ergonomics. As a result of these assessments, workplace improvement recommendations were given.

TABLE №13 **Ergonomic Assessment Reports**

Years	2013	2014	2015
Number of assessments	43	74	77

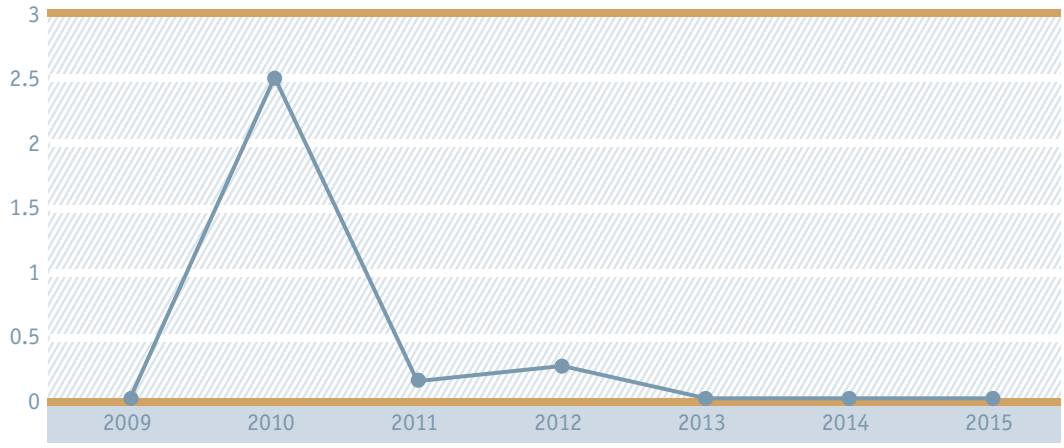
Fitness to work assessment

Mandatory fitness to work examinations helps establish the baseline data and ensure a periodic evaluation of employee's health and are aimed to prevent adverse health effects of the employment. 1,987 employees attended the periodic check-up in 2015. No occupational diseases have been detected.

As a socially responsible organization, KPO takes an active role in promoting health. Apart from the statutory medical check-ups, since 2013 the Company offers its office-based employees an opportunity to undergo medical screening every three years. This screening is in line with the State Healthcare Program 'Salamatty Kazakhstan', and is designed to detect early signs of illness. Practically, the screening for office-based personnel is run every year to cover new employees and those who did not attend in the previous year as scheduled.

However, after the initial high attendance in 2013-2014 (more than 70%), in 2015 there was a significant decrease in the number of people willing to have a check-up (11%). One explanation of this decline in interest could be the non-mandatory nature of this screening.

GRAPH №9 **Occupational Diseases Frequency**



KPO applies the frequency of occupational diseases calculated as follows:

Occupational diseases frequency (per mln of man-hours) = number of occupational diseases x 1,000,000 / man-hours.

TABLE №14 **Occupational Diseases Frequency – KPO***

Indicators	2009	2010	2011	2012	2013	2014	2015
Occupational Diseases Frequency (KPO)	0.00	2.46	0.14	0.28	0.00	0.00	0.00

** Contractors' information is not available for disclosure.*

Health Promotion

Increasing employees' awareness of general and occupational health issues remains a substantial part of the Health Department's activities, among which are:

- Healthy Heart program was continued with the focus on diabetes and hypertension. Themed posters, presentations and log-on messages have been used to increase employee awareness of diabetes.
- In liaison with General Services, food nutrition information has been put on display in company canteens.
- Individual health improvement plans have been reviewed and follow-up continued for high cardiac risk employees.
- Smoking cessation courses have been arranged for more people determined to quit.
- Back pain program was continued with the focus on the individual health plans. An exercise program was introduced for those, who elected to work with the Czech Camp fitness centre trainers.
- Medical support staff continued their program of toolbox presentations.
- Log on messages were used to convey health-related messages in liaison with Corporate Safety.
- Online "Asbestos awareness course" has been provided to all employees.
- World Health Organisation global campaigns were reflected in Health bulletins and posters that were displayed or emailed to all staff.

TABLE №15 **Health promotion in 2015**

Campaign	Number of topics	Number of people involved
Antismoking course	1	31
Health bulletins	9	All KPO
Health posters	10	All KPO
Start-up messages	40	All KPO

Industrial hygiene and control of workplace exposures

Statutory workplace monitoring is one of the functions of the Sanitary Laboratory, an in-house industrial hygiene service. 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.

One of the year's objectives was to analyse the RoK exposure limits against the international ones and adopt the stricter limits. For most of the substances (90%) RoK values were found to be more stringent.

For example, the maximum permissible concentration for Hydrogen sulphide (H_2S) is 5 mg/m^3 in Kazakhstan and 7 mg/m^3 in OSHA (Occupational Safety and Health Association of the USA); for methanol – 5 mg/m^3 in Kazakhstan and 260 mg/m^3 in OSHA, etc.

Sanitary and hygienic monitoring consists of measuring workplace physical factors (Table № 16) and measuring concentrations of hazardous substances in the air of the working area (Table № 17).

TABLE №16 **Monitoring of physical factors, 2014-2015**

Physical factors	2014		2015	
	№ of surveys	Non-compliance	№ of surveys	Non-compliance
Noise	430	98	444	109
Vibration	120	13	102	17
Electromagnetic fields	3,768	51	3,956	44
Electrostatic fields	1,988	0	2,107	0
Lighting	2,424	770	2,890	843
Microclimate	4,512	328	7,992	574
Total	13,242	1,260	17,491	1,587

TABLE №17 **Monitoring of air in the working area, 2015**

Monitoring activities	Workplace air
Planned measurements	14,007
Completed measurements	13,665*
Number of exceedances / incompliances	3
Percentage of measurements exceed / do not comply with maximum permissible limits (MPL)	0.02

** Incompletion was due to restricted access to the facilities (e.g. Rig move) or measured equipment malfunction (e.g. KPC Gas turbine not operating).*

Measuring noise levels at an operating facility

SECURITY

TABLE №18 **Our targets in security**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
Ensure zero illegal taps in the Export pipeline	YES	Regularly planned meetings with representatives of local authorities, local police and local Emergency Situations department were held to discuss issues related to the pipeline security.	Maintain zero illegal taps in the KPO Export pipeline
Ensure clauses on Human Rights and Security Principles for security services' providers are implemented, including training for employees focused on this issue	YES	28 training sessions were held. Regular scheduled meetings with representatives of security service providers were conducted to evaluate the effectiveness of the training.	Continue training on Human Rights and Security Principles for Security service providers
	NEW TARGET		As part of the implementation of the Security Management System (SMS): ■ Deliver work packs for installation of fencing at KPC, Unit 2, Unit 3 and EOPS; ■ Install fencing at Unit 2 and EOPS; ■ Start tender process for the SMS design.

Similarly to 2014, in 2015 KPO had no registered cases of illegal taps in the Export pipeline. This achievement once again demonstrates the effectiveness of the work performed by all the stakeholders involved in maintaining an elevated standard of security along the pipeline.

In 2015, the work on development and implementation of the Security Management System (SMS) progressed. In the year, the manufacture of the new security fencing was completed and materials were delivered. All the activities for engineering design started and are ongoing. The SMS project will continue through to 2019 and in addition to fencing will also include installation of further Electronic Access Control (EAC), Closed-Circuit Television (CCTV), Perimeter Intruder Detection System (PIDS) and also two dedicated Control Rooms. Moreover, badging of contracting organizations was completed by 100% as part of the general improvements in electronic access control.

Besides, Security team continued to assist Corporate HSE in the development and introduction of a new electronic system recording personnel on board (POB) and evacuation process in case of emergencies in the Field. Installation of equipment in the production facilities and testing were completed. Activities started for placing maintenance contract to cover the new equipment.

In 2014 KPO management took a commitment to follow the Voluntary Principles on Security and Human Rights (VPSHR). In 2015, an assessment against the VPSHR conducted jointly by BG Group and KPO. Personnel of the two KPO Security providers involved in security services in the Field/Aksai received the formal dedicated training in human rights policies/procedures that are relevant to operations. As of the end of 2015, the percentage of security personnel trained was 100%.

Nowadays, a potential risk of extremist activity against the Company remains our big concern. Interrelation between KPO and the RoK law enforcement authorities at the local, regional and national levels are essential for our forewarning and preparedness. Regular meetings, development of new procedures, and familiarization visits followed by anti-terrorist exercises in the past year had all assisted in raising awareness in this area and will continue in 2016 along with computer based awareness training.

PEOPLE AND SKILLS

Our employees are essential and fundamental for the development and operations of the Karachaganak Field. Our business objectives can only be achieved through their dedication, hard work and professional skills. We continue our efforts on staff development by adopting practices of our Parent Companies, organizing necessary training and attracting well-known educational institutions.

TABLE №19 **Our targets in personnel development and remuneration**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
Continue implementation of the Programme for increasing Kazakhstani content in staff for 2015-2020 and achieve 73% in Category 1+2 in 2015	YES	The strategy aimed at training, retraining and advanced training of the citizens of Kazakhstan	Continue implementation of the Programme for increasing Local Content in staff for 2015-2020 and achieve ≥ 75% in Category 1+2 in 2016
Sign a new collective agreement with improved conditions for employees	NO	The delay in signing a new Collective Agreement in 2015 was due to recessionary measures in Kazakhstan's economy and expected amendments in the Kazakhstani Labour Code. Besides, the third reason of delay was a disagreement between the two Trade Unions.	Conclude a new Collective Agreement
Continue the planned adjustment of the personnel salary to the market level	NO	This target was re-considered following the costs' optimisation in 2015 and the low level of staff turnover.	Conduct a benchmark analysis of compensation levels in KPO at the relevant market and implement adjustments, if necessary
Review the effectiveness of the company's organizational processes	ONGOING	The process is ongoing.	Continue reviewing the effectiveness of organizational processes.

The total number of employees in KPO (within the company and working on temporary projects) at the end of 2015 amounted to 4,401 employees, 4,086 of them local workers and 315 are expatriates.

GRAPH №10

KPO workforce, 2012-2015

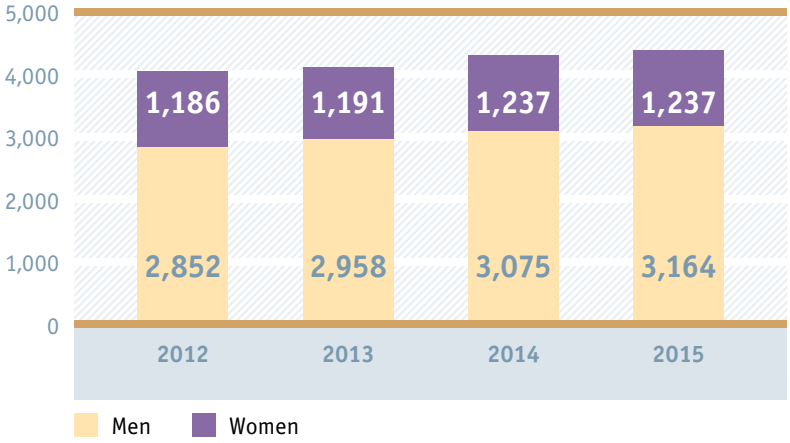
Graph №11 shows the employees by gender, 3,164 men and 1,237 women worked in KPO in 2015.

Temporary employees are external market candidates, hired for limited time period to replace the direct employee, who is on unpaid or maternity leave or seconded to one of the Parent Companies.

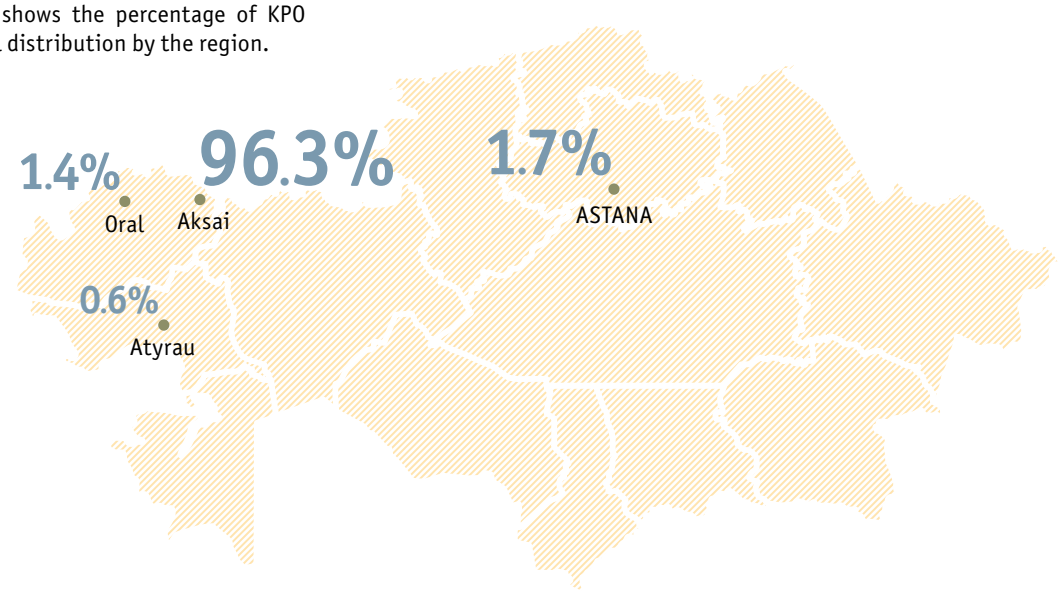
In 2015, the number of temporary employees was 73.

GRAPH №11

KPO workforce by gender, 2012-2015

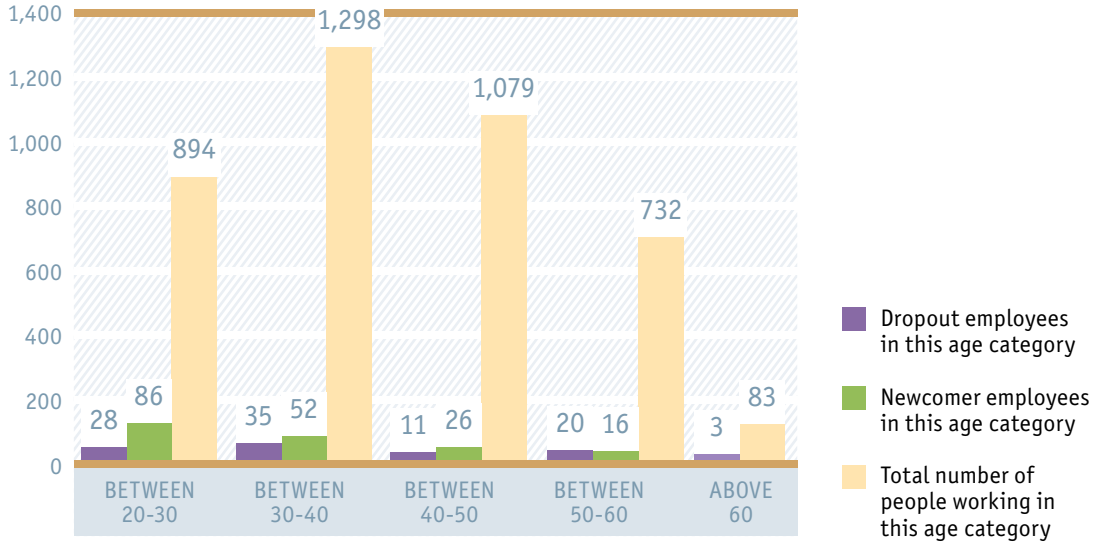


The map shows the percentage of KPO personnel distribution by the region.



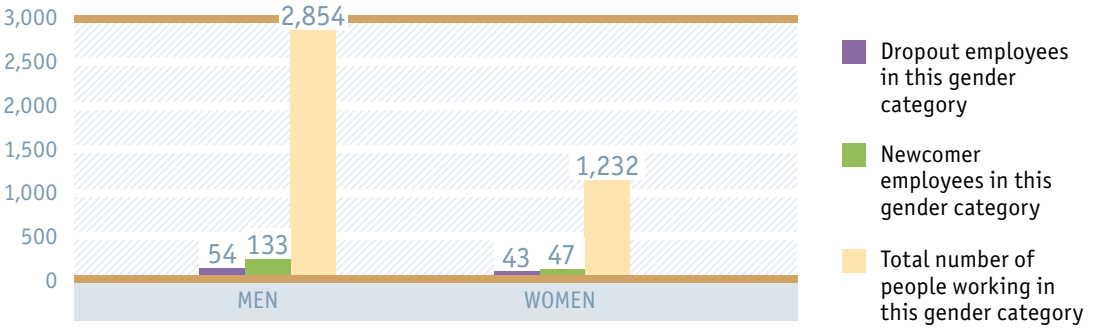
The total number of employees leaving employment and newcomers, by age groups for the reporting period is shown in Graph №12. This graph includes employees holding permanent and temporary employment contracts with KPO.

GRAPH №12 **Personnel turnover by age, 2015**

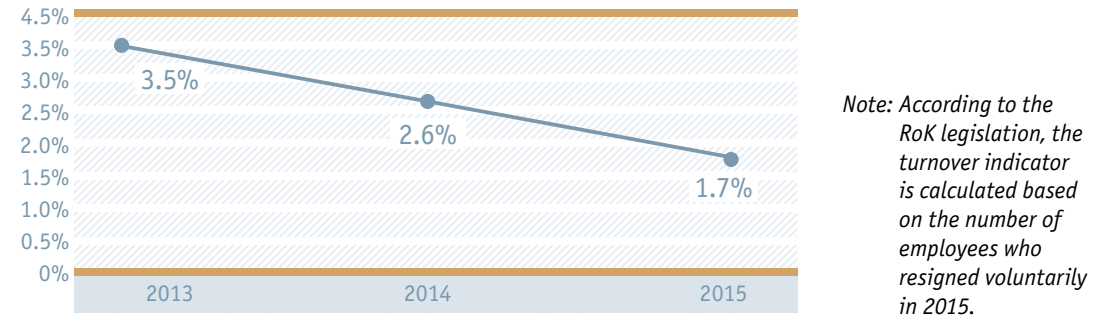


Graph №13 shows the total number of employees, who left the company and newly hired employees by gender for 2015. In 2015 newly hired employees at KPO made up 4.4%.

GRAPH №13 **Personnel turnover by gender, 2015**



GRAPH №14 **Dynamics of local personnel turnover, 2013-2015**



Note: According to the RoK legislation, the turnover indicator is calculated based on the number of employees who resigned voluntarily in 2015.

Development of national personnel

At the Youth KazEnergy forum

In view of the changes in the RoK legislation on Attraction of the foreign workforce introduced in 2012, KPO Nationalisation Programme was revised into the Programme for Increasing Local Content in Staff having set the discharge period from 2015 to 2020 in line with the FPSA commitments.

The revised KPO Programme for Increasing Local Content in Staff for 2015-2020 aims to maximize job opportunities for local communities and to invest in local workforce. Working towards these goals, KPO pursues to the increase of local content in staff and improvement of its organisation effectiveness. The Programme covers the following:

- The strategy for increasing of local content in staff;
- The objectives for the forthcoming five-year period and the tools to achieve them;
- Workforce categorization in line with the latest RoK Legal requirements;
- The scope of the Programme encompasses the entire KPO Organisation including both short and long term projects;
- The monitoring mechanism used at KPO and the principles of reporting to the Authority and regional departments of Healthcare and Social Development.

Increasing of the Local Content in staff is an important structural element in the creation of KPO's economic heritage. Recognising the importance of this, KPO uses multiple development tools for personnel to promote them to management level across all business units. The focus is made on development of the talented and dedicated local employees, thus contributing to their ongoing professional development. Additionally, according to the RoK Government Resolution № 45 of 13.01.2012, KPO has assumed a commitment to monitor and control Local Content in staff in its contractor organisations since 18.11.2015. It is expected that strategy for increasing local content in staff in the forthcoming five-year period 2015-2020 will allow to:

- Improve effectiveness of the training & development process of local employees;
- Increase the number of local KPO employees, their contractors and subcontractors.

In the framework of KPO Programme for increasing Local content in staff, in 2015 8 positions among senior and middle management and 13 positions among qualified specialists and supervisors were nationalised in 2015. As a result of KPO's efforts to substitute foreign specialists with local professionals, as of end 2015, local employees make up 92% of the total staff. Indicators by categories are shown in Table №20.

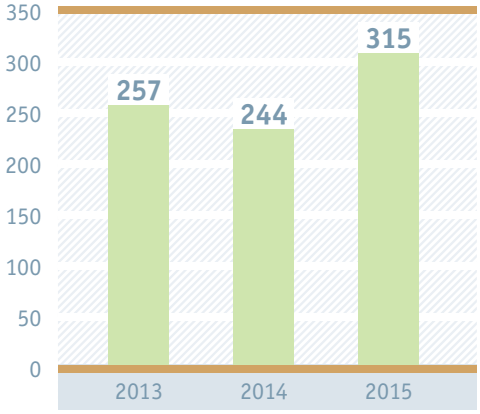
TABLE №20 **Implementation of KPO Nationalization plan in 2015 by categories of employees**

Category	Description	RoK Legal requirement	2015
1+2	Executive management and their deputies, Department / Unit management	No less than 70%	79%
3+4	Professional staff / Qualified workers	No less than 90%	96%

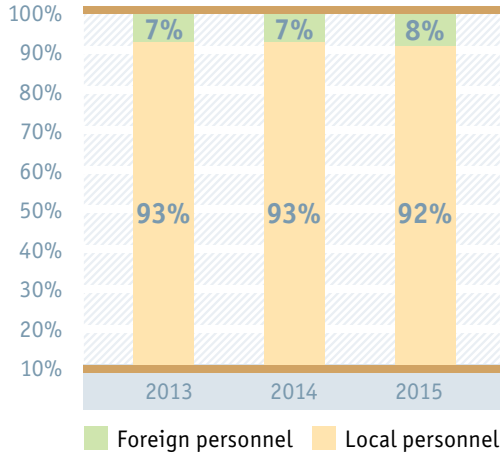
Graph №15 shows the total number of expatriates in KPO including personnel involved in the temporary projects according to the KPO Program for increasing Local Content in staff for 2015-2020.

Graph №16 shows data on the number of local and expatriate staff in KPO.

GRAPH №15 Number of expatriate staff, 2013-2015

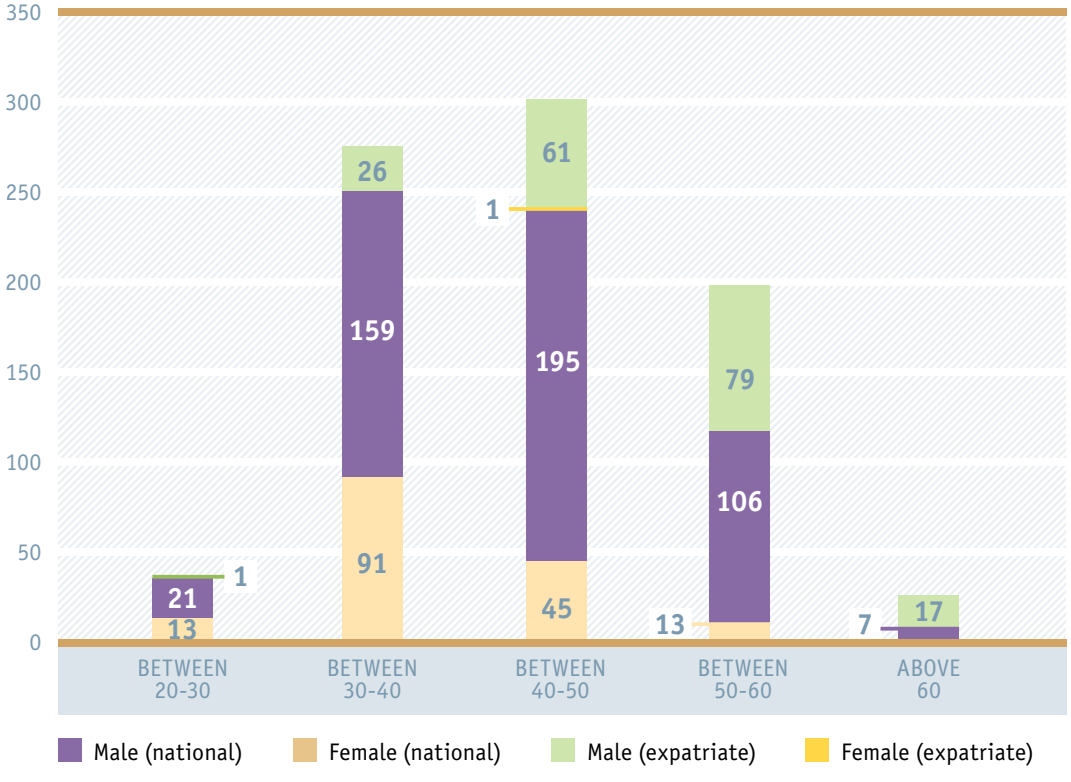


GRAPH №16 Share of local and expatriate staff, 2013-2015



Graph №17 shows the total number of senior and middle management in the structure of KPO, including principal organization and temporary projects, expatriates and local employees, divided by age groups and by gender.

GRAPH №17 Number of local and expatriate managers by age and gender category, 2015



Training and development

KPO is committed to support employees in their professional development. Looking for ways to optimise the costs in 2015, the Company funded the ongoing training programmes and mandatory training courses which meet the operational needs and safety requirements in line with the FPSA. This approach demonstrates the potential cost-effectiveness for achieving outcomes at the same time maintaining employees' motivation and productivity.

Annually, KPO implements the training and development plan, including the following:

- International qualifications (CIPD and CIPS);
- Professional training;
- HSE Mandatory training;
- Internship program for local staff.

KPO Training and development programmes provide opportunities for employees to improve their knowledge and experience, considering the strategic plans of Parent Companies and relevant needs of personnel. These include training, retraining and advanced training. In addition, we use a method of personnel development, such as Internship program for local staff.

Internship program for local staff

KPO is committed to creating a developmental and motivating working environment, which values and empowers its talents. The opportunities provided with an internship practice used in KPO meet this goal.

Internship program for local staff is a form of on-the-job training targeting development of technical and managerial skills of the national employees. The Programme enables gaining international experience, improving personal effectiveness and enriching cross-cultural interchange.

Internship program for local staff is a temporary assignment of an employee from KPO to one of Operator, Parent Company or its affiliates to occupy a role (other than senior levels of management) in Petroleum Operations.

In the framework of KPO strategy for increasing Local Content in staff, the Internship program for local staff is an implementation tool to identify and develop high-potential national employees for further filling managerial and core business positions at KPO.

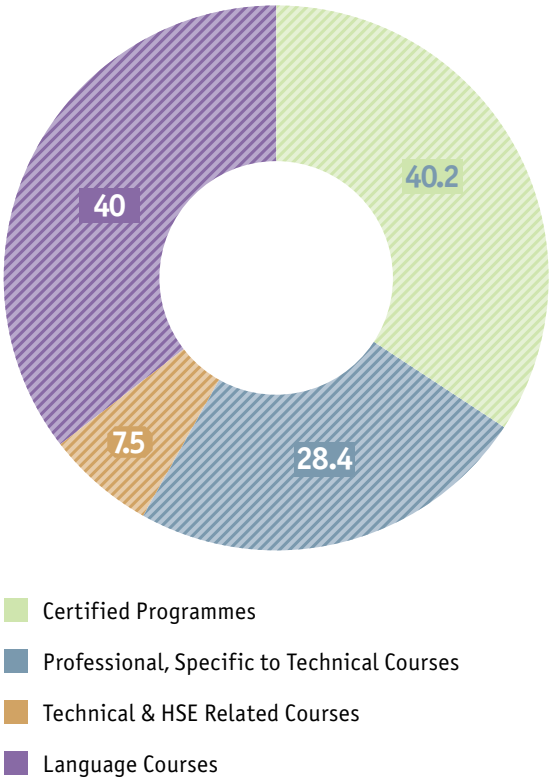
Implementation of the Internship program has been acknowledged both by an employee and the KPO organisation as effective in career growth, personal development and enhancing the KPO skill base.

Training statistics

In 2015, 325,339 hours of training (444,448.5 hours in 2014) were held, 168,799 hours of which were provided to KPO employees (275,175.5 hours in 2014). The remaining 156,540 hours (169,273 hours in 2014) were provided to employees of contracting organizations for HSE mandatory courses. On average, the USD 162 (USD 274 in 2014) was spent for training per employee in 2015, due to the cost optimisation in 2015.

The average number of training hours per employee is shown in the following graph.

GRAPH №18 **Average number of training hours per employee by type, 2015**



Training conducted for company employees in 2015 by categories is given in Table № 21. In total in 2015, 40,866 courses were conducted, 28,918 of them – for employees of contracting organizations. The data is presented in comparison with 2013 and 2014.

TABLE №21 **Training of employees by categories, 2013-2015**

Category	2013	2014	2015
Managers and supervisors	310 persons 64.5 hours per 1 employee	251 persons 37.8 hours per 1 employee	219 persons 39.64 hours per 1 employee
Qualified specialists/ group leaders	1,988 persons 66.6 hours per 1 employee	1,873 persons 74.2 hours per 1 employee	1,682 persons 49.13 hours per 1 employee
Technical personnel	956 persons 115.3 hours per 1 employee	1,283 persons 85.4 hours per 1 employee	1,045 persons 92.1 hours per 1 employee
Office and administrative personnel	599 persons 15.4 hours per 1 employee	259 persons 21.7 hours per 1 employee	421 persons 16.5 hours per 1 employee

Competency management system

KPO leadership recognized Competency modelling as one of the most relevant methods to determine the requirements for personnel training and development and set the following objectives:

- To create an effective planning tool for training and development of KPO employees with involvement of line managers;
- To identify individual needs of employees in training and development;
- To ensure planning of funds for personnel training and development purposes.

In September 2015 KPO Competence Management System confirmed validity of the awarded OPITO accreditation.

During 2015, KPO has continued the application of Competency management system in two directions: non-technical and technical.

For non-technical departments, the assessment of professional development needs (PDNI) was performed in such KPO divisions as: Government Relations, Legal Directorate, and Corporate Governance Controllership. Based on the results, the system generates individual reports by areas of improvement for each employee for further training and development planning.

For technical departments, the assessment process is in place and performed to assure technical personnel competence level and to minimize occurrence of incidents and accidents in the Field associated with lack of involved personnel's competency.

In 2015, KPO has achieved 90% of compliance with technical personnel competence standards requirements. As a result, 635 employees with technical qualification completed initial assessment and received KPO CMS certificates.

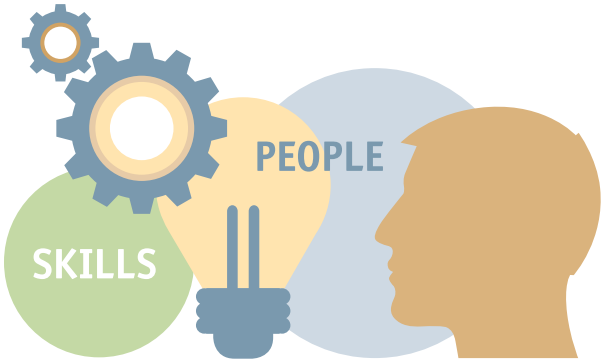
In 2015, 6 KPO national employees and 5 contractor company's employees from CAIH Power, Baker Hughes and Dietsmann, were granted by OPITO Oil and Gas Academy with international certified qualification "Competence assessor". Additionally, 14 KPO national employees passed training and received OPITO internal auditor certificates.

In order to stimulate the competence level of technical personnel, in October 2015, KPO has launched the additional periodicity requirement in the assessment process.

The implementation of this system is planned to cover all KPO departments and all KPO contractor organizations in the future.

Dual education in KPO

Dual education programme has been practiced at KPO since 2005. In 2015, eight students successfully completed the Drilling Supervisor programme and 60 students – the Production Operations and Maintenance Technician professional development programme (OPITO). The employment process has been ongoing since end of 2015.



Employee relations

KPO respects the right of KPO employees to organize a trade union and participate in negotiations of collective agreement. Trade Union plays one of the key roles in supporting and protecting the rights of employees.

There are two Trade Union organizations representing the interests of KPO employees. Trade Unions develop their draft of Collective Agreement including the various aspects of social and labour relations. The provisions of Collective Agreement apply to all KPO employees regardless of their membership in Trade Unions.

The terms and conditions of the Collective Agreement signed in 2012 remained valid in 2015. The Collective Agreement was not revised as planned considering the anti-recessionary measures in Kazakhstan's economy and expected amendments in the Kazakhstani Labour Code. Alongside with this, the process was hampered with disagreements between the two Trade Unions and subsequent changes in their structure.

In the year 2015 both Trade Union organizations passed re-registration with the RoK Ministry of Justice under names of Public Association «Local Trade Union of employees of Oil & Gas Company KPO» and Public Association "Karachaganak local professional union of KPO employees and contractors".

According to 2012 Collective Agreements, KPO shall give minimum 2 months (8 weeks) notice to Trade Unions in cases, such as liquidation of the company with a following reduction in staff and change of the type, system or payment amount leading to deterioration of employees' condition.

KPO established a system of grievance, which includes a direct application of grievances/appeals to HR Controllership and through Trade Unions and an anonymous "Hotline".

Employee Relations section reviews disputes and grievances received through the available grievance mechanisms. The grievances considered in 2015 primarily included issues on salary increase, provision of additional paid leave and disagreement of employees with the rating for performance development review (PDR) for the reporting period, conflict situations within the department, non-prolongation of the employment agreements, exceeding the authority in job duties, misconduct by a contractor employee. All 6 grievances and appeals have been considered and resolved in due time.

To prevent potential risk of forced labour and/or violations of employees' rights to hold a meeting or have a collective bargaining due to insufficient attention to legal compliance in some contracting and subcontracting companies, KPO as the general customer, provides clarification of legal requirements and internal Procedures/Policies to all contractors on a regular basis. In 2015 the employees of 14 contracting companies are the members of the "Karachaganak Local Professional Union of KPO employees and contractors".

In the framework of Collective Agreements, KPO pension plan involves Voluntary Dissolution of Employment Relationship Programme. More detailed information is available in the 2014 Sustainability Report on page 103.

In 2015, 12 KPO employees applied for the voluntary dissolution under this programme (10 employees in 2014).

KPO employees, the winners of HSE Awards Programme

Compensations and benefits

KPO is a socially responsible company interested in retention of competent local staff and their promotion.

KPO provides the social benefits package to all directly hired employees. Annually, the Company makes a review for its employees' remuneration, including the cost-of-living salary increase at the beginning of the year (7.4% in 2015), annual bonus payment to employees with positive performance evaluation in April, and individual salary increases as part of the Annual Pay Review process.

In addition to the above, in December 2015 KPO paid the bonus following the excellent HSE and Operating Efficiency results achieved by employees in the year.

As part of the market research analysis process, no additional salary adjustment was made in line with the cost optimization and low level of staff turnover: – 1.7% in 2015 as opposed to 2.6% in 2014 and 3.5% in 2013.

The social package is an essential part of employment and it consists of financial and non-financial benefits, including the following:

Annual benefits for direct employees:

- Year-end bonus;
- Oil&Gas Worker's Day bonus;
- Payment for health recovery;
- Payment for sanatorium treatment.

Social benefits:

- Educational Scholarship Program;
- Allowance for Afghan War veterans;
- Dismissal pay for early retirement;
- Social aid to KPO's pensioners;
- Monthly loyalty allowance for KPO seniority;
- Payment for a birth of a child.

Regional benefits:

- Housing and travel allowances for personnel with permanent registration outside of Aksai;
- Allowance for improvement of living conditions for personnel living in Aksai;
- Regional allowance for employees in Astana.

Holiday and anniversary payments:

- Jubilee Bonus for female employees reached 50- and 55-years and male employees on their 50- and 60-years anniversary);
- International Women's Day bonus;
- Bonus on the Final Production Sharing Agreement anniversary every 5 years.

Financial aid:

- Financial aid to a deceased employee's family;
- Financial aid in case of an employee's family member death;
- Financial aid in case of a KPO pensioner's death.

Non-financial benefits:

- Medical insurance;
- Free transport to/from work;
- Free meals for employees working in the Field or meal allowance for personnel with particular working conditions on site;
- New Year gifts for employee's children;
- Additional paid vacation;

To ensure continuous improvement of performance in the Company's activities, KPO has an annual Performance and Development Review (PDR) procedure. The PDR procedure is applied to all KPO direct employees, who have worked for minimum six calendar months during the year prior to the appraisal. For employees holding managerial positions a dedicated process of tracking their annual Key Performance Indicators against the set targets is in place.

Employees hired at KPO via recruitment agencies are covered by Collective Agreements of these agencies. Separate scheduled payments to cover the benefits of employees hired via recruitment agencies, including the budget, are agreed between KPO and these agencies.

According to the Collective Agreement, the minimum wage for young professionals in the company is set at KZT 120,000. The annual comparison with statistical data done in 2015 showed that the average wage of KPO employees is 3 times higher than the average rate in the West Kazakhstan Oblast.

Review of the effectiveness of the company's organizational processes

In 2015 KPO directed its efforts at improvement of the working processes efficiency and optimization, including:

- Organizational units and teams that form different areas of the supply chain commencing from purchase request / contract award/logistics to delivery to KPO premises were consolidated within one directorate.
- Corporate translation resources previously scattered in different organizational units were consolidated in a single pool of translators.
- Local Business Development related activities were consolidated within one organizational unit.
- Number of overtime hours in 2015 was reduced by 28% in comparison with 2014.

66 employees not directly involved in production process were relocated from the Field facilities to Aksai with the aim to reduce their health and safety risks at work.

KPO partnership with Kazakhstani Universities

Contributing to development of youngsters as future professionals in the Republic of Kazakhstan, KPO provides opportunities for best students of the Kazakhstani universities to be up to date with perspectives and innovations in oil and gas business.

In 2015 in the framework of the KPO Student Placement Programme 428 students on 21 specialities from 23 educational institutions passed internship in different departments of the Company. In the period 2009-2015, 135 young specialists, residents of the Burlin district, undertook youth placement in KPO. 27% of them were hired at KPO afterwards.

KPO employees are engaged in different events of universities.

- For instance, on 17 April 2015, the engineers from KPO Production Department Gani Sultanov and Yerbulat Khalelov took part in the XII International Young Generation Oil &Gas Forum in Kazakh National Technical University after K.Satpayev (currently KazNRTU). They made a presentation about the importance of personal development for career growth. Thanks to such engagement, the young KPO professionals shared their work experience, achievements and plans with students – the future oil and gas professionals.
- By invitation of the Semey Geological Research College, Karl Abryshev, Well Operations Permits and Regulation Expert, took part in the state qualification commission for evaluation of the College graduates' diploma works on "Drilling Oil & Gas Wells and Technology of Drilling" speciality.
- Enhanced operational efficiency, as a result of deep integration of education, science and industry recognized as one of the main guideline of Kazakhstan strategic development till 2050 and Conception of joining of Kazakhstan to the world top 30 developed countries.

  With this aim KPO participated in the Forum "University and Foreign Companies: partnership opportunities and prospects of development" which was held in the West Kazakhstan Agrarian-Technical University after Zhangir Khan. Within a framework of this event, a "KPO Day" was organized in this University. The students received information about KPO activities and its contribution to the social infrastructure and economy of the Western Kazakhstan. The film named "Karachaganak: Mutually Beneficial Partnership" was presented too. At the event Tanat Sultanov, KPO Senior Field Production Engineer made the presentation 'Key Skills for Success' about his career in KPO highlighting the importance of competitiveness of specialists nowadays.
- KPO took part in the Job Fairs held at the West Kazakhstan Agrarian-Technical University and Economics & Information Technologies College to raise awareness of pre-graduate students about the KPO employment requirements, work conditions and on-the-job training opportunities.

Scholarship programmes for national employees and their children

KPO considers people as most valuable asset of the company and provides opportunities of continuous professional development for its employees. Introduced since 2002, KPO Scholarship Programme for national employees and their children has been recognized adding value to the national staff's further higher education.

As a result of improved skills and enhanced education employees may change their work roles, thus developing in career and obtaining new professional skills.

Along with KPO employees, the Programme allows their children to receive financial support for professional education.

In 2015, 25 KPO employees were sponsored under KPO Sponsorship Programme for National Employees and 36 children of employees received financial aid under the KPO Donation Programme for National Employees' Children.

CARING FOR THE ENVIRONMENT

KPO applies advanced techniques and world class technologies to ensure environmental protection. Environmental protection in the field requires the careful management of operational risks that may result in environmental impacts through effective implementation of controls to eliminate risks or reduce impacts to the minimum practical.

KPO remains committed to the principles of sustainable development in relation to its environmental practices and management philosophy. The key aspects of the KPO HSE policy include minimization of adverse environmental impact and assurance of environmental protection and environmental safety. KPO's environmental protection goals include the reduction of greenhouse gas emissions and conservation of natural resources by introducing best available technologies.

TABLE №22 **Our environmental targets**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
Achieve reduction of greenhouse gas emissions by 199 thousand tonnes of CO_2- equivalent	NO	In 2015 the actual reduction of GHG emissions amounted to 151 thousand tonnes of CO_2- equivalent	Achieve reduction of GHG emissions by 200 thousand tonnes of CO_2- equivalent
Ensure that specific GHG Emissions do not exceed 14 tonnes CO_2 per Mboe of production	YES	In 2015 the actual specific GHG emissions amounted to 12.46 tonnes of CO2 per Mboe of production.	Ensure that specific GHG Emissions do not exceed 70 tonnes of CO_2 per thousand tonnes of hydrocarbons produced
Ensure that the throughput losses do not exceed 3.82%	YES	In 2015 the actual throughput losses amounted to 3.6%.	Ensure that the throughput losses do not exceed 3.82%
Conduct a Surveillance audit for compliance of the KPO Environmental Management Systems with the requirements of ISO 14001	YES	As part of the integrated Surveillance Audit held in July 2015, the KPO Environmental Management System was verified for compliance to the ISO 14001:2004 and OHSAS 18001:2007 standards.	Verify compliance of the KPO Environmental Management Systems with the requirements of the ISO 14001 standards as part of the Surveillance audit

Complete the works on the Field Water treatment plant upgrade project	ONGOING	Construction works associated with the Field water treatment plant upgrade project were completed. The pipeline and sodium hypochlorite pumping station were installed at the Unit-3 BIO-50 Treatment Facility.	Commission the sodium hypochlorite pumping station at the BIO-50 effluents treatment facility in Unit-3
Construction of four new cells at the Landfill	YES	Construction of the four new cells has been completed.	Construct three new cells at the Landfill
Implement the following activities as part of the Work Project for Phase I Tree-planting of Established SPZ and setting out of its boundaries: ■ Preparation of 48 ha soil for tree-planting in 2016; ■ Tending of trees and shrubs planted in 2010-2014 in the area of 206 ha; ■ Implementing fire-prevention measures in the area of 326 ha; ■ Reconstruction of existing forest belts.	ONGOING	The following activities were implemented as part of this project: ■ Preparation of 20.5 ha soil for planting in 2016; ■ Tending of trees and shrubs planted in 2010-2014 in the area of 206 ha; ■ Fire-prevention measures in the area of 326 ha – ploughing and cultivation of fire breaks; ■ Installation of the 43 guide signs and 4 information boards at the boundary of the established SPZ.	Prepare for planting the soil on the 28 ha area along the Aksai-Priuralnyi motor road
Continue scientific researches for further development of the project on the use of the removed topsoil	ONGOING	As per the 2015 schedule, a Scientific Research Program "Identification of ways for further use of piled topsoil" has been developed. The inventory of piled topsoil has been completed at the Karachaganak Field (KOGCF), Bolshoi Chagan Oil Pumping Station and Atyrau Terminal Oil Pumping Station.	Complete the scientific research activities specified in the Program for Identification of ways for further use of piled topsoil
Update the database of species based on the results of fauna monitoring at KOGCF	YES	The database of fauna species inhabiting the KOGCF area has been updated.	
	NEW TARGETS		Conduct the following scientific research activities on the flora conservation at the KOGCF: ■ Monitor vegetation in the KOGCF impact area for potential influencing factors; ■ Study the spread of the rare type of Fritillária ruthénica in the main riverside ecosystems.

ENVIRONMENTAL MANAGEMENT SYSTEM

The integrated KPO HSE Management System was developed in line with the best industry practice and the ISO 14001 internationally acknowledged standard. KPO was certified to the ISO 14001 standard in 2008 and since then has been receiving annual confirmation of its compliance to this standard.

In 2015 the certified body "Bureau Veritas Certification" conducted an ISO 14001:2004 Management System Compliance audit and issued a recommendation for the certification of KPO's Environmental Management System. The purpose of the compliance audit was to verify consistency of the compliance and efficiency of the overall management system, as well as its suitability within the certification scope.

As directed by the said international standard, in 2015 the Company developed and issued the Summary Register of Environmental Aspects providing the review and summary of all aspects of KPO activities, which may have a significant impact on the environment. These aspects include pollutant emissions and greenhouse gas emissions, spills of petroleum products, hydrocarbons and chemicals, generation and discharge of industrial waste water into the subsoil, generation and disposal of waste. The respective activities continue to take place in 2016.

Starting from 2016, KPO initiated preparation for the transition into the new environmental management system standard ISO 14001:2015, which was published in September 2015 and sets more extensive requirements. The ISO 14001 certified companies have to undergo certification on the new standard within three years. The new standard describes wider requirements with regard to leadership, communication, risk assessment and accounting of the life cycle of products and waste.

At the KPO Enviromental Conference for contractors

ENVIRONMENTAL PROTECTIVE MEASURES PLAN 2015

To achieve the set goals, including those listed in table № 22, KPO develops the Environmental Protective Measures Plans (EPMP) pursuant to the Chapter 10 of the Environmental Code of the Republic of Kazakhstan (RoK). The process of developing, controlling and implementing the EPMP was detailed in our 2014 Sustainability Report on page 62.

In 2015 KPO performed its operations in accordance with the issued Environmental Emissions Permits and the developed EPMPs presented further in the table № 23.

As provided by the RoK Environmental Code, the prepared draft Environmental Protective Measures Plan is to be agreed with the community. For this purpose the Company holds public hearings. In 2015 KPO held two public hearings. The original 2015 EPM Plan was presented to the community on 27 June 2014, while the revised EPM Plan for July-December 2015 was presented on 4 June 2015. The Plans have received the agreement of the Burlin Region community.

TABLE №23 **KPO Environmental Protective Measures Plans and Environmental Emission Permits issued in 2015**

Developed and agreed Environmental Protective Measures Plans for 2015	Permits obtained for 2015	Permit issued by
KPO EPMP 2015 for Karachaganak Field	Environmental Emissions Permit № KZ19VCZ00024105 dated 28.11.14. (actual validity: January 01 – June 30, 2015)	RoK Ministry of Energy, Committee for Environmental Regulation, Control and State Inspection in oil and gas sector
KPO EPMP for the Karachaganak Field for the period of July-December 2015	Environmental Emissions Permit № KZ94VCZ00025762 dated 30.06.15 (actual validity: July 01 – November 26, 2015)	RoK Ministry of Energy, Committee for Environmental Regulation, Control and State Inspection in oil and gas sector
KPO EPMP for the Karachaganak Field for the period of November 27 – December 31, 2015	Environmental Emissions Permit № KZ35VCZ00062132 dated 27.11.15 (actual validity: November 27 – December 31, 2015)	RoK Ministry of Energy, Committee for Environmental Regulation, Control and State Inspection in oil and gas sector
KPO EMPM for 2015 for the KPC-Bolshoi Chagan-Atyrau export condensate pipeline (Western Kazakhstan Oblast (WKO)	Environmental Emissions Permit № KZ58VDD00014175 dated 04.12.2015 (actual validity: January 1 – December 31, 2015)	WKO Akimat, Western Kazakhstan Oblast Administration of Natural Resources and Nature Use Control
KPO EPMP for 2015 (Atyrau Oblast)	Environmental Emissions Permit № KZ20VDD00013016 dated 28.09.2014 (actual validity: January 1 – December 31, 2015)	Atyrau Oblast Akimat, Atyrau Oblast Administration of Natural Resources and Nature Use Control

In 2015 there were three KPO Environmental Protective Measures Plans (EPMP) developed for the validity term of each of the Environmental Emissions Permits (EEP). The EPMP for 2015 was the original plan; the following EPM Plans were the revised versions to meet the validity period of the respective Environmental Emissions Permits. All environmental protection measures foreseen in the EPMP were agreed by the Committee for Environmental Regulation, Control and State Inspection in the oil and gas sector of the RoK Ministry of Energy.

The primary KOGCF EPM Plan for 2015 was adjusted for the July-December period and afterwards- for the November 27 – December 31, 2015 period. The two new measures were added to the adjusted Plan for July-December: conduction of an energy audit in compliance with the RoK legislation and implementation of the

TABLE №24 **Expenses for implementation of the 2015 EPMP, in KZT**

Sections of the EPM Plan	Actual expenses for implementation of KPO measures in the Karachaganak Field in 2015	Actual expenses for implementation of KPO measures on the KPC-Bolchoi Chagan-Atyrau export condensate pipeline (WKO) in 2015	Actual expenses for implementation of KPO measures (Atyrau Oblast) in 2015
Air conservation	126,136,625	18,640,110	3,723,944
Conservation and rational use of water resources	No expenses	NA[1]	NA
Land conservation	258,236,116	NA	NA
Subsoil conservation and rational use	248,471,528	NA	NA
Flora and fauna conservation	47,384,912	159,081	10,726,278
Production and consumption waste management	1,701,559,641	0	0
Radiation, biological and chemical safety	2,844,712	NA	NA
Introduction of management systems and best safe technologies	51,445,241	NA	The expenses are included in the overall amount of the KPO certification costs
Scientific research and FEED and design projects aimed at the environmental protection	260,878,067	4,300,222	4,355,424
Environmental awareness and environmental promotion	12,448,833	NA	NA
Total:	2,709,405,675	23,099,413	18,805,646

[1] *NA – measures are not applicable.*

energy management system in line with the ISO 50001 standard.

In 2015 the total actual expenses for the implementation of environmental measures for the Karachaganak Field under the three Plans amounted to KZT 2,709,405,675. Expenses planned for 2015 amounted to KZT 2,736,415,053.

Expenses by sections of the KPO Environmental Protection Measures Plan for 2015 are shown in the table № 24.

The results of the Environmental Protection measures implemented by KPO in 2015:

- In 2015, KPO re-used 31,213 m^3 of treated wastewater for making drilling mud, in 2014 – 123,419 m^3;
- In 2015 the area of reinstated lands increased by 26% in comparison with 2014. 74.4 hectares of the soil disturbed as a result of well operations and construction activities were reclaimed. In 2014, 59 hectares of soil was restored;
- In 2015, the quantity of waste acumulated at the Eco-Center solid waste and spent drilling mud disposal site amounted to 9,177.54 tonnes, which is 35% more as compared to 6,823.3 tonnes in 2014;
- In 2015, 124.22 tonnes of solid waste from the sock filter were caught and transported to the Solid Industrial Waste Burial Landfill;
- In 2015, 2.18 tonnes of scrap metal, 9.3 tonnes of plastic and 29.9 tonnes of waste paper from the domestic waste segregation unit were taken for treatment and re-use, and 341.7 tonnes of the sorted waste components were taken to the general purpose incinerator for burning;
- Construction of 4 cells was completed at the Eco Centre's Solid Industrial Waste Burial Landfill and were accepted by the State Commission on 15 October 2015;
- The ISO 14001 Surveillance Audit was successfully conducted in July 2015.

Environmental fines

Any business on the production of natural gas involves the use of appropriate equipment for lifting gas to the surface and pumping it to the processing plant. These operations take place under high pressure. If the gas pressure begins to exceed the set parameters for some reasons, then pressure has to be released by flaring in order to avoid: a) an explosion; b) emissions into the atmosphere. Therefore, the gas flaring is an integral part of operations as per Design in the oil and gas fields globally, not only at Karachaganak.

Unfortunately, the current legislation interprets such flaring as 'excessive', which means high payments for that despite flaring volumes remain within given quota. KPO continues its efforts aimed to harmonize the legislation of RoK with appropriate world-accepted norms. However, currently KPO has to pay the fines imposed by regulatory authorities for such allegedly excessive gas flaring. Thus, in 2015 the amount of significant fines, including for 'excessive flaring', paid by KPO amounted to KZT 1.58 bln, of which:

- KZT 0.49 bln was the amount of the administrative fines based on the unscheduled environmental inspections in 2015;
- KZT 1.09 bln – the amount of the civil proceedings sought to KPO in 2015 for recovery of environmental damage.

At the same time KPO expressed disagreement with the decisions of the courts to recover from the Company's alleged damages, and in this connection appealed to the Court.

AIR EMISSIONS

The Company's air emission control activities are carried out as permitted by the limits established in the Environmental Emissions Permit. Emissions to the air principally arise from routine fuel gas combustion for the operation of the gas-turbine power plants, boilers, process heaters and compressors as well as from operational flaring events. In 2015 emissions to the air decreased by 19% in comparison with 2014 and totaled 11 thousand tonnes. Table № 25 shows data on the permissible and actual KPO's emissions for the period of 2013-2015.

TABLE №25 **Permitted and actual volumes of pollutant's emissions**

Annual volume of emissions by pollutants, in tonnes:	2013	2014	2015
Permitted:	**15,321**	**16,168**	**14,807**
Actual, including:	**11,320**	**14,005**	**11,314**
Nitrogen oxides	2,068	2,240	1,594
Sulphur dioxides	5,703	7,346	6,113
Carbon monoxide	1,637	2,229	1,723
VOCs	1,700	1,718	1,515
Hydrogen sulphide	29	31	29
Solid particles	110	325	90
Others	73	116	249

Notes: 1. Emission volumes are provided in accordance with the data of statistical reports '2-TP Air' for 2015 based on the actual calculations.

2. In 2015, KPO (KOGCF) operated under the three permits: No. KZ19VCZ00024105 (from 01.01.15 to 30.06.15); No. KZ94VCZ00025762 (from 01.07.2015 to 26.11.2015) and No. KZ35VCZ00062132 (from 27.11.2015 to 31.12.2015).

3. The total permissible volume was calculated as a sum of actual emissions in the first two periods and permissible emissions in the third period.

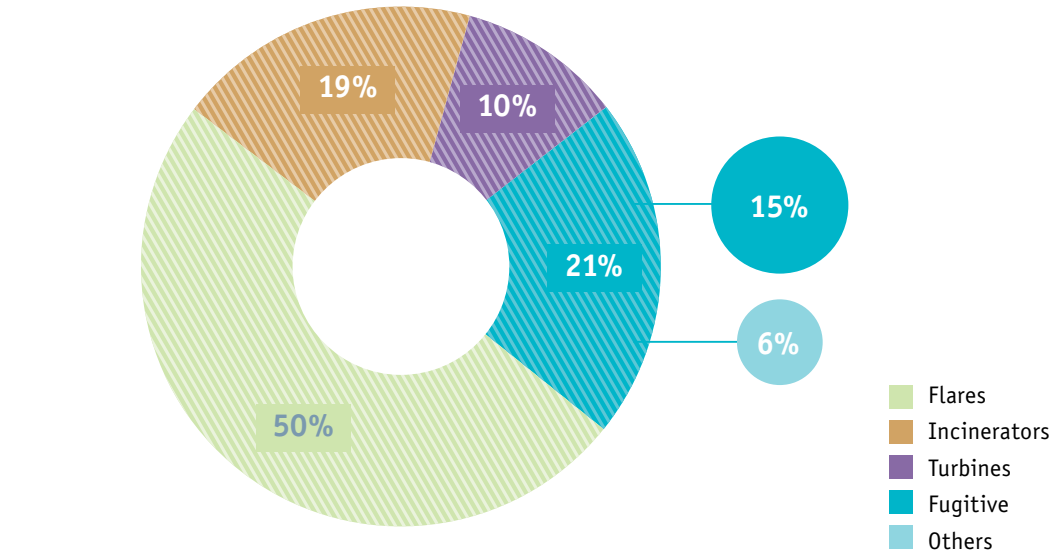
Environmental emissions in KPO are estimated using the calculation method based on the initial data on consumption and composition of the fuel and equipment operation time. KPO applied the calculation method due to the lack in the RoK of the certified devices ensuring continuous monitoring at the emission sources.

Rate of flaring is calculated applying the method of continuous measurements and fuel balance; diesel fuel consumption is calculated based on the data of statutory accounting; equipment operation time is calculated based on the daily operator reports. The oil and gas composition is determined by the certified internal laboratory.

Componential calculations of emissions are carried out on the basis of the data on every substance and type of emission sources applying the methods recommended for application in the Republic of Kazakhstan. Graph 19 shows pollutants emissions broken down by the main air pollution sources.

GRAPH №19

Pollutant emissions in KPO in 2015 by main sources of air pollution

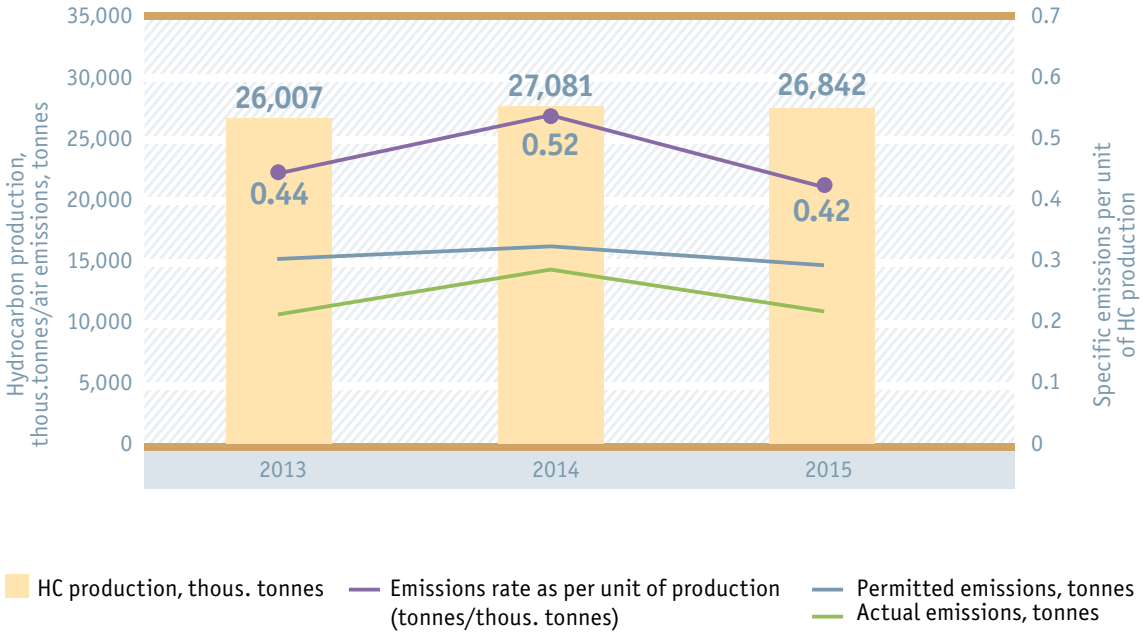


In 2015 specific emissions per unit of production amounted to 0.42 tonnes per thousand tonnes of hydrocarbons (HC) production.

The decrease in emissions between 2014 and 2015 were mainly due to a reduction in well operations with 17 wells completed in 2015 compared with 19 in 2014. The reduced scope of well operations resulted in a reduction of flaring of associated gas by 24% through well test and clean-up operations in 2015. In addition, liquid hydrocarbons of the base volume[1] flared were reduced to 40% by the use of hydrocarbon liquid recovery equipment.

GRAPH №20

Volume of hydrocarbon production and environmental emissions in 2013-2015



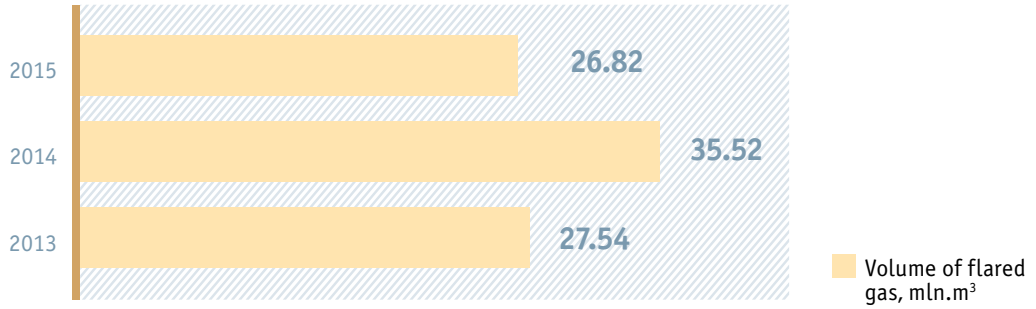
[1] *i.e. of the volume flared without this equipment.*

Gas flaring

As in previous years, the main contribution to the KPO total emissions volumes in 2015, resulted from flaring at flare stacks at the process facilities and from flaring during well operations. Nevertheless, the total volume of flared gas in 2015 amounted to only 0.15% of the total volume of produced gas by KPO or 0.88 tonnes per thousand tonnes of produced hydrocarbons. This flaring emissions intensity in 2015 shows very strong operational performance when compared to worldwide industry averages of 14.8 tonnes per thousand tonnes, and a European average of 3.5 tonnes[2] per thousand tonnes as reported by IOGP in 2014.

KPO continues to work towards further emission reduction technologies, with a particular focus in the area of well testing and well clean-up reductions.

GRAPH №21 **Volume of associated flared gas, mln m³**

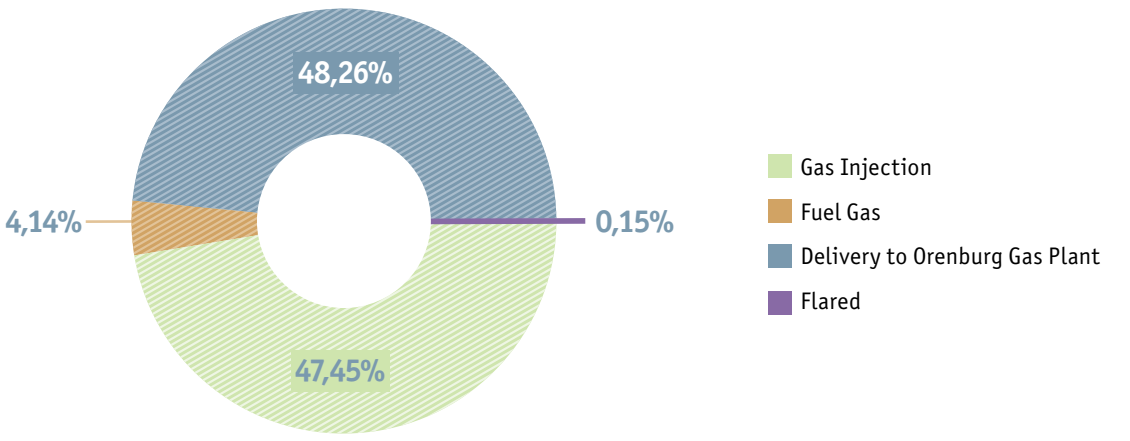


In 2015, in addition to the use of new equipment for partial oil recovery during well clean-up, KPO also used the Megaflow equipment which results in a reduction of emissions to the air. As a result of adopting these initiatives, the volume of liquid hydrocarbon flaring decreased by almost 40 thousand tonnes through adoption of recovery systems, which totaled 60% of the oil volume produced during well completions. The Megaflow system reduced gas flaring during the well clean-up to 20 mln m³ considerably lower than the volume permitted in 2015 of 55.7 mln m³.

Gas Utilization

In 2015, KPO achieved the gas utilization rate of 99.85% (99.81% in 2014). Once again this proves the KPO world-class level compared to the performance target of 99.6% approved by the RoK regulatory authorities within the 2015 Associated Gas Processing and Development Programme.

GRAPH №22 **Gas utilization and flaring in 2015**



[2] *The data was sourced by the Annual reports of International Associations of Oil & Gas Producers, (IOGP) «Environmental performance indicators-2013 data» and «Environmental performance indicators-2014 data». Since the report for 2015 has not been issued yet, the 2014 data is used for comparison purpose.*

Sanitary protection zone (SPZ)

A Sanitary Protection Zone (SPZ) is set by the RoK based on industrial operations with the aim to act as a buffer zone between the industrial plant and the communities. The SPZ is a protective barrier ensuring reliable level of safety for community during facilities operation in a normal process mode.

In 2015 the area of existing SPZ around the perimeter of the Karachaganak Oil and Gas Condensate Field (KOGCF) was revised by the Government of the Republic of Kazakhstan in consideration of the planned expansion of the field between 2018 and 2022. The proposed expansion program scheduled in 2018 includes an upgrade of Unit 2 and the drilling of new wells with new facilities proposed in 2020 including a new gas re-injection station, a new condensate processing train and three additional gas turbines to produce electrical power. The new SPZ is planned to enter into force from 2018.

To determine the boundary limits of the SPZ the work program carried out in accordance with RoK mandated procedures. Specifically, the work program is designed to determine an overall boundary outside of which there is no exceedance in Maximum Permissible Concentration (MPC) of each component resulting from existing and expanded facility emissions and the potential risk to community health. The work program included:

- the determination of the surface concentrations of air emission components with account of the future developments based on the maximum one-time annual average concentrations of components (63 substances and 11 summation groups);
- the evaluation of the levels of physical impact from the future developments;
- potential chronic and acute health risks to community possible from the future developments according to the calculation made by U.I. Kenessariev, Doctor of Medical Science, Professor, Head of Hygiene and Ecology Department in the National Medical University named after Asfendiyarov.

The proposed new boundaries of the expanded SPZ cover the villages of Berezovka and Bestau. To ensure safety of the communities in Berezovka and Bestau, the RoK authorities have decided to resettle the residents from both villages as per the Government Resolution of 28 July 2015. More information on resettlement can be found in Community Engagement Section.

ENVIRONMENTAL MONITORING

KPO performs large-scale environmental monitoring as provided by the Production Environmental Control Program (PEC). Within the scope of PEC, monitoring of both the environmental emissions (emissions to air, discharge of wastewater, and the treatment and disposal of wastes) and the quality of environmental components (air, surface and underground water and soil) is conducted to assess the impact of production activities on the environment. The PEC Program determines sampling/measuring locations, the list of components to be identified and monitoring frequency.

The PEC is conducted within the Karachaganak field, at the Sanitary Protection Zone boundary, in the nearby villages, along the motor road and at the facilities of the KPC–Bolshoi Chagan–Atyrau export condensate pipeline.

Air quality monitoring at the boundary of the SPZ of the Karachaganak field and adjacent villages is arranged and carried out in accordance with the requirements of the State standard GOST 17.2.3.01-86 «Nature protection. Atmosphere. Air quality control regulations for populated areas» and the Ruling Document 52.04.186-89 «Guidelines for the control of air pollution».

Pursuant to article 132, item 9 of the RoK Environmental Code, environmental monitoring shall be carried out by the production or independent laboratories, certified as per the procedure established by the RoK Law "on Technical Regulation". KPO conducts air monitoring by means of a contracted certified laboratory, which performs sampling, sample analysis and performs instrumental measurements in accordance with the PEC Programme.

To evaluate the air quality, the health-based exposure limits (maximum permissible concentrations) are used. Recorded concentrations of controlled components are compared with the health-based exposure limits, indicating the level of pollution in % of maximum permissible concentrations.

MPC of an air pollutant is a concentration which does not cause a direct or indirect lifelong negative impact on the present or the future generations and does not reduce the working capacity of a person and his/her health and does not deteriorate the sanitary and living conditions of human beings.

In addition to the legislative compliance, KPO carries out continuous air monitoring by means of 18 stationary automatic environmental monitoring stations (EMS). Each station has four analysers designed for continuous measurement of hydrogen sulphide (H_2S), sulphur dioxide (SO_2), nitrogen dioxide (NO_2) and carbon monoxide (CO) content in the air. The EMS also activates a warning alarm in case of high concentration of emissions in the air.

Mobile air monitoring is conducted when required at individual sites using one of two fully equipped mobile environmental monitoring laboratories.

KPO Enviromental Monitoring Station in Berezovka

Air monitoring at the boundary of the sanitary protection zone of the Karachaganak field

As well as continuous air emissions monitoring by the 18 EMS, the certified Contractor laboratory conducts air sampling at the boundary of the SPZ once a day. The samples are analyzed for the content of the same four components measured at the EMS: hydrogen sulphide (H_2S); sulphur dioxide (SO_2); nitrogen dioxide (NO_2); and carbon monoxide (CO). This sampling also measures methane (CH_4) and methylmercaptan (CH_3SH) content.

In 2015 no exceedance of the maximum permissible air concentration of the monitored components at the KOGCF SPZ was recorded. Average concentrations of the monitored air components at the boundary of the SPZ for 2015 is given in the table № 26.

TABLE №26 **The average annual concentrations of the monitored air components recorded at the SPZ boundary in 2015**

Monitored components	Actual annual average concentration, mg/m³	MPC one-time, mg/m³	Exceedance of MPC
H_2S	0.002	0.008	no
SO_2	0.004	0.5	no
NO_2	0.028-0.030	0.2	no
CO	0.479-0.491	5.0	no
CH_4	1.402-1.463	50**	no
CH_3SH	Below limit of detection*	0.006	no

* *below the limit the method can detect.*

** *determined approximate safe level of impact. MPC for methane is not determined.*

Atmospheric air monitoring in the villages adjacent to the Karachaganak field

The certified Contractor laboratory also has stationary air monitoring stations in 8 villages located around the field (Berezovka, Bestau, Zharsuat, Zhanatalap, Dimitrovo, Karachaganak, Priuralnoe, Uspenovka) and in the town of Aksai which perform air sampling 4 times a day (at 1:00 am, 7:00 am, 01:00 pm and 7:00 pm). Sampling of air is carried out by the permanent personnel of the contracted laboratory who reside in the villages where the stationary air monitoring stations are located.

Moreover, unscheduled air sampling is performed at the stationary monitoring stations if a complaint is received from the residents, such as a complaint regarding an unusual odour. Air samples are taken to the laboratory located in the town of Aksai where the samples are chemically tested for the content of the 4 main components: hydrogen sulphide (H_2S), sulphur dioxide (SO_2), nitrogen dioxide (NO_2) and carbon monoxide (CO) that are monitored in accordance with the State Standard and Ruling Documents. In addition, once in 10 days the air is monitored for concentration of volatile organic components: benzene (C_6H_6), toluene (C_7H_8), xylene (C_8H_{10}). In the village of Berezovka, monitoring also includes the air concentration of methylmercaptan (CH_3SH).

Monthly results of air monitoring are published in local printed media and sent to the villages for posting on public information boards. The disclosure includes details of local community complaints received in relation to emissions and odours.

While the average monthly MPC of NO_2 was not exceeded in 2015, there were a total of eight exceedances of the daily average MPC measured out of 53,910 measurements: 1 occurrence in Karachaganak village – by 1.025 times, 2 occurrences in Zharsuat – by 1.025 times and by 1.225 times, 3 occurrences in Zhanatalap village – once by 1.1 times, twice by 1.175 times; and 2 occurrences in Uspenovka village – by 1.05 times. MPC exceedance of other monitored components was not recorded throughout 2015.

Annual average concentrations of monitored air components in the villages in 2015 are given in table № 27:

TABLE №27 **Annual average concentrations of monitored air components in the villages adjacent to KOGCF in 2015**

Monitored components	Actual annual average concentration, mg/m³	MPC daily average, mg/m³	Exceedance of MPC daily average
H_2S	0.002	0.008*	no
SO_2	0.004	0.05	no
NO_2	0.028 – 0.029	0.04	no
CO	0.432 – 0.485	3.0	no
C_6H_6	0.092 – 0.098	0.3*	no
C_7H_8	0.013 – 0.014	0.6*	no
C_8H_{10}	0.013 – 0.015	0.2*	no
CH_3SH	Below limit of detection**	0.006*	no

* *MPC one-time. MPC daily average for hydrogen sulphide and methylmercaptan is not established, therefore, MPC one-time is referred to for comparison purpose; MPC one-time is also applied in order to evaluate the concentration of benzene, toluene and xylene in the air given the frequency of components analysis of the samples, which is once every 10 days.*

** *below the limit the method can detect.*

Air monitoring by Automatic Environmental Monitoring Stations (EMS)

KPO Automatic Environmental Monitoring Stations that perform continuous air monitoring is an additional source of information on the air condition at the boundary of the SPZ and in the village of Berezovka.

Annual average concentrations of monitored components recorded by EMSs in 2015 are given in tables №№ 28 and 29.

TABLE №28 **Annual average concentrations of monitored components in 2015 recorded by EMS**

Monitored components	Actual annual average concentration, mg/m³	MPC daily average, mg/m³	Exceedance of MPC daily average
H_2S	0 – 0.001	0.008*	-
SO_2	0.003 – 0.006	0.05	no
NO_2	0.003 – 0.009	0.04	no
CO	0.1 – 0.4	3.0	no

* *MPC one-time. The MPC daily average for hydrogen sulphide is not determined, therefore, MPC one-time is used for comparison purpose.*

TABLE №29 **Annual average concentration of monitored components recorded by EMSs № 013, 014 in the Berezovka village in 2015**

Monitored components	Actual average concentration, mg/m³	MPC daily average, mg/m³	Exceedance of MPC daily average
H_2S	0.001	0.008*	no
SO_2	0.004	0.05	no
NO_2	0.004 – 0.005	0.04	no
CO	0.2 – 0.4	3.0	no

** MPC one-time. The MPC daily average for hydrogen sulphide is not determined, therefore, MPC one-time is applied for comparison purpose.*

All existing 18 EMSs measure four main pollutants (H_2S, SO_2, NO_x, CO) on a continuous basis, i.e. 24 hours per day. According to the data received from the EMSs in 2015, the actual daily average concentrations of H_2S did not exceed the MPC, although a one-time short-period (20 minute) exceedance of MPC was registered. Other ingredients did not exceed the MPC level for the reporting period.

TABLE №30 **Exceedances of one-time MPC of hydrogen sulfide (H_2S) recorded by EMS in 2015**

EMS №	Actual one-time concentrations recorded in 2015, mg/m³		Number of exceedances	Frequency of MPC exceedance, one-time
	Min	Max		
EMS-005	0	0.016	5	1.125 – 2.0
EMS-006	0	0.017	4	1.25 – 2.125
EMS-012	0	0.010	1	1.25
EMS-017	0	0.037	3	1.125 – 4.625
EMS-018	0	0.051	4	1.25 – 6.375

One-time MPC is 0.008 mg/m³.

Direct greenhouse gas emissions

Across the Company the direct greenhouse gas (GHG) emissions are regulated under the national quotas trading system in place since 2013. KPO has been obtaining GHG emission quotas since 2013.

The KPO's GHG emissions quota for 2014–2015 was 3,557,440 tonnes of carbon dioxide (CO_2) in accordance with GHG emission Certificate No. 100258, BC series. With account for the additionally bought 240,000 tonnes of CO_2, the current total quota volume for KPO amounts to 3,797,440 tonnes of CO_2. As per the RoK National Allocation Plan 2014-2015, GHG Quota includes CO_2 emissions only.

To ensure that the GHG emissions are within the issued quota limits, the Company performs quarterly assessment of the GHG emissions for carbon dioxide (CO_2) and methane (CH_4) in full conformity with the approved monitoring plan for 2014-2015. The emission assessment was performed using the calculation method based on the Company performance data (fuel consumption and lab test results on fuel composition) with reference to the current Guidelines № 280 dated 05.11.2010 approved by the Environmental Authority.

For 92% of greenhouse gas emissions, the selected monitoring method allows making the Methodology level III emission calculations using rates obtained on the basis of the continuous measurements results.

Based on the verified GHG Inventory Report 2015, the total volume of greenhouse gas emission amounted to 1,944,165 tonnes of CO_2-equivalent, of which CO_2 share equaled to 1,786,951.4 tonnes of CO_2-equivalent (91.9%), CH_4 – 148,854.4 tonnes of CO_2-equivalent (7.7%), and N_2O – 8,359.1 tonnes of CO_2-equivalent (0.4%).

For converting the GHG emissions into the carbon dioxide equivalent (CO_2) the global warming potentials (GWP) of Intergovernmental Panel on Climate Change (IPCC) of 1995 were used based on the climate impact of greenhouse gas for 100 years period.

At the end of the year, the monitoring results (inventory report) for the reporting year are validated by an independent accredited organization. The approved inventory report for the reporting year is submitted to the Authority on April 01, 2016.

On the basis of verified GHG Inventory Reports 2014–2015, the quota balance for 2015 for KPO was 132,259.6 tonnes of CO_2.

Information on the GHG generated is provided in Table № 31. The main contributors are emissions resulted from combustion of the fuel gas at the gas turbines of the gas re-injection system, gas turbine power plants and high-pressure steam generation plant (up to 77%). In 2015 the GHG emissions slightly decreased compared with the similar period of 2014. The decrease results mainly from the reduced volume of hydrocarbon flaring at wells.

TABLE №31 **Dynamics of GHG emissions generated as a result of KPO production activities**

General volume of greenhouse gas emission (in tonnes CO_2 equivalent)					
From fuel combustion at flares and incinerators	From fuel combustion at stationary sources	Fugitive emissions	**Total GHG emissions 2015**	Total GHG emissions 2014	Total GHG emissions 2013
226,226	1,571,958	145,981	**1,944,165**[3]	2,027,367[4]	1,730,694

Note: the data for 2013, 2014, 2015 was validated by the independent accredited organization.

Indirect greenhouse gas emissions

KPO's gas turbine power plant is designed to ensure power supply for the production facilities, support activities and also provide power to adjacent villages. Indirect greenhouse gas emissions from additional electrical power consumption generated at the regional power systems of the Western Kazakhstan Oblast constitute an insignificant part of the total KPO GHG emissions – (0.005%) and amounted to 69 tonnes of CO_2-equivalent. These emissions are not subject to accounting and are not included into the reporting data provided under the internal GHG emission quota system of the Republic of Kazakhstan. The information on the indirect emissions is provided in the reports for the KPO's Parent Companies.

[3] *The amount includes: CO_2 – 1,786,951.4 tonnes of CO_2-equivalent (91.9%), CH_4 – 148,854.4 tonnes of CO_2-equivalent (7.7%), and N_2O – 8,359.1 tonnes of CO_2-equivalent (0.4%).*

[4] *The amount includes: CO_2 – 1,878,229 tonnes of CO_2-equivalent (92.6%), CH_4 – 149,138 tonnes of CO_2-equivalent (7.4%)*

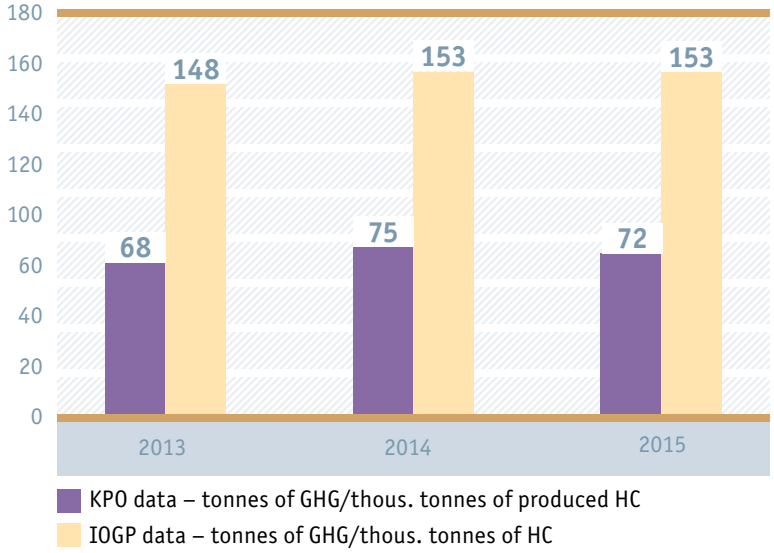
Specific greenhouse gas emissions

In 2015 the specific greenhouse gas emissions per unit of production amounted to 72 tonnes per thousand tonnes of hydrocarbon produced. Reduction since 2014 were due to the following:

- Reduced volume of flared hydrocarbons (in terms of gas – by 30%, in terms of liquid hydrocarbons – by 12%) during well operations;
- Reduction of electric power generation at the Gas Turbine Power Plant by 11%;

Dynamics of specific greenhouse gas emissions is shown in graph № 23.

GRAPH №23 **Dynamics of specific GHG emissions per unit of produced hydrocarbons (HC)**



Note:
The data was sourced by the Annual reports of International Associations of Oil & Gas Producers, (IOGP) «Environmental performance indicators-2013 data» and «Environmental performance indicators-2014 data». Due to the fact that the 2015 IOGP report had not been released at the time this issue was published, the 2014 data is used for comparison purpose.

Table № 32 shows very strong performance at the Karachaganak field when comparing GHG emissions intensity figures with data provided by the international oil and gas producers (IOGP). Actual GHG emissions intensity in the field in 2015 were lower than the European values by 23%-29% and lower than the average international values by 49-56%.

TABLE №32 **Comparative analysis based on the specific greenhouse gas emissions per the unit of hydrocarbons produced**

Categories of environmental indicators	KPO data			IOGP data (Europe)*	IOGP data (in total)*
	2013	2014	**2015**	2014	2014
CO_2+CH_4 (CO_2e)					
Tonnes per thousand tonnes of hydrocarbons produced	68	75	**72**	96	153
CO_2					
Tonnes per thousand tonnes of hydrocarbons produced	62	69	**67**	86	134

* *The data source is the annual report of the International Associations of Oil & Gas Producers (IOGP) «Environmental performance indicators-2014 data». Due to the fact that the 2015 IOGP report had not been released at the time this issue was published, the 2014 data is used for comparison purpose.*

Reduction of greenhouse gas emissions

For the purpose of systematic GHG emission reduction and to comply with the legislative requirements of the Republic of Kazakhstan, KPO pursued the targets set in the "Greenhouse gas emissions reduction programme for 2014-2015" for operations. The programme was developed:

- to reduce greenhouse gas emissions (CO_2) by 198,555 tonnes through implementation of a number of energy efficiency and optimization projects,
- to ensure that the specific emission volumes do not exceed 70 tonnes of CO_2 per thousand tonnes of produced hydrocarbons or 14 tonnes CO_2 per million barrels of oil equivalent produced.

In 2015 the KPO specific indicator of CO_2 emissions totaled 67 tonnes of CO_2/thousand tonnes of produced crude hydrocarbons (table № 32). Following the delivery of 4 projects listed in table № 33, the actual reduction of greenhouse gas emissions made 76% of the target indicator.

TABLE №33 **GHG emissions reduction measures in 2015**

№	Measures	Emissions reduction, tonnes/year		% of completion
		Target	Actual	
1	Partial oil recovery during well clean-up	173,400	113,856	66
2	Repairing of valves of KPC flare headers	10,279	22,746	221
3	Adjustment of the steam flowmeter at processing train № 4	6,645	11,977	180
4	Monthly washing of the operating axial-flow compressors of gas turbines with water during spring and summer period	8,231	2,013	24
	Total:	198,555	150,592	76

ENERGY MANAGEMENT

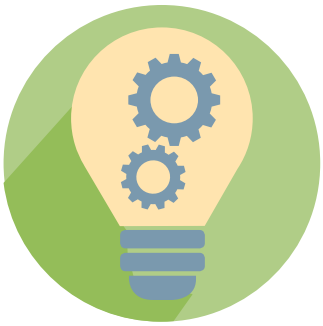


TABLE №34 **Our targets in energy management**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
■ Conduct independent energy assessment (mandatory energy audit in accordance with the requirements of law of the RoK), to obtain Conclusion for energy saving and efficiency and to develop an action plan for energy saving and energy efficiency increase; ■ Develop and implement the elements of the energy management system for energy planning, implementation and maintaining.	IN PROGRESS	■ Energy Audit (Assessment) was conducted and the Conclusion was issued. KPO specific energy consumption against production in 2015 totaled 2.4%. ■ Energy Management System implementation is ongoing. Energy review was performed and energy baseline was identified. Based on the energy review, the energy objectives and targets and energy management action plan for 2016 was developed, training needs associated with the control of significant energy uses and the operation of EnMS identified. Requisitioning and tendering procedure was amended with a requirement for energy assessment of potential suppliers.	■ Monitor implementation of Energy Saving and Energy Efficiency Improvement Action Plan for the period 2016-2020 developed based on the Energy Audit results. ■ Continue implementation of Energy Management System as per requirements of ISO 50001 standard.
■ Continue personnel training on Implementation of the Energy Management System (EnMS).	YES	During 2015 the majority of key operational personnel associated with the control of KPO significant energy uses and the operation of EnMS was covered. Number of energy management awareness sessions performed for in 2015 amounted to 6.	

Implementation of energy management system

With the aim of achieving the targets set out in the KPO Energy Policy issued in 2014, KPO started implementation of the Energy Management System (EnMS) in 2015.

An energy review was performed to identify the energy baseline and based on this review the energy use objectives were devised and shaped in an Energy Management Action Plan for 2016. The Action Plan was developed including the training needs associated with the control of significant energy uses and the operation of EnMS identified.

Amongst other objectives set in the Action Plan, the requisitioning and tendering procedure was amended in 2015 with a requirement for energy assessment of potential suppliers.

Energy Audit

In line with the RoK law "On Energy Saving and Energy Efficiency Improvement", KPO conducted an Energy Audit (or Assessment) in 2015. Following the results of the audit the Conclusion №27 on energy saving and energy efficiency improvement of KPO was issued on 23 November 2015.

The outcome of assessment found that KPO's specific energy consumption against production totaled 2.4%. According to the data of Performance Improvements Ltd, a leading engineering consultancy in the oil and gas industry worldwide, this indicator ranges from 2 to 6% (as per data) confirming that KPO's operations and facilities are close to the most energy efficient in the international oil & gas industry.

The Energy Audit also estimated potential total energy savings of up to 12.57% from the baseline are possible through the implementation of numerous energy use reduction projects to obtain these energy savings. The most significant energy efficiency opportunities to be implemented between 2016 and 2020 have been approved for further implementation and once completed will reduce energy consumption by a further 4%. The 2016–2020 opportunities are related to the installation of the inverters to electrical drives (VFD), optimization of heating, pressured air and water supplying systems.

Based on the Energy Audit results, the Energy Saving and Energy Efficiency Improvement Action Plan for the period 2016–2020 was developed and agreed in accordance with an officially established procedure.

Energy consumption

In 2015, the energy consumption totaled **994,590** tonnes of coal equivalent compared to 1,028,498 tonnes of coal equivalent in 2014. Table below shows the energy consumption by types of energy.

TABLE №35 **Energy consumption in 2013-2015**

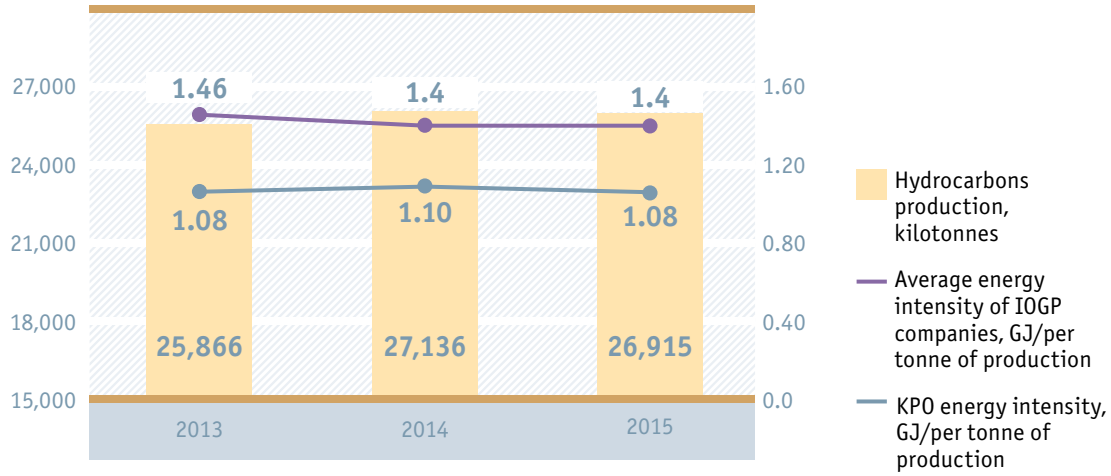
Type of energy	Unit of measure	Energy consumption, physical units			Energy consumption, tonnes of coal equivalent			Energy consumption, GJ		
		2013	2014	2015	2013	2014	2015	2013	2014	2015
Fuel gas	Kscm	774,964	831,050	804,002	954,756	1,023,854	990,531	27,983,895	30,009,149	29,032,455
Electrical energy (purchased)	MWh	8,544	6,672	7,575	1,051	821	932	30,801	24,055	27,308
Diesel	Scm	1,094	1,779	1,215	1,380	2,244	1,532	40,449	65,767	44,901
Gasoline	Scm	395	351	321	436	387	354	12,783	11,344	10,386
Heat (in the rented offices)	Gcal	9,579	8,338	8,678	1,370	1,192	1,241	40,148	34,949	36,373
				TOTAL	958,993	1,028,498	**994,590**	28,108,076	30,145,264	**29,151,423**

Note: Energy consumption data for 2013 and 2014 are different from relative data that were provided in previous Sustainability reports due to the results of energy audit, where we were recommended to include energy consumption from buildings that are leased. Previously, the actual value of energy consumption by specified objects has not been considered in gross electricity consumption index in KPO.

In Quarter 2 of 2015 the Gas Turbine Generator № 3 installed at KPC power station was out of operation as transformer failed to operate. That led up to a consequent decrease of fuel gas consumption in 2015 as compared to 2014. Additionally, a decrease in diesel fuel consumption was observed at the Gas Turbine Power Station (GTPS).

Compared to 2014, as shown in Graph № 24, the energy intensity indicator or a ratio of the quantity of consumed energy, GJ and the quantity of output production in tonnes of crude hydrocarbons was slightly decreased due to the aforementioned energy consumption decrease.

GRAPH №24 **Dynamics of energy intensity in 2013-2015**



Note: Energy intensity data for 2013-2014 was slightly altered compared with the KPO report for 2014 due to the changed method of calculation, as the volumes of geological losses and technologically unavoidable gas flaring were not included to ensure consistency with the data of Energy Audit Report. In addition, the IOGP data for 2014 and 2015 was updated based on their Report «Environmental performance indicators – 2014 data». At the time of preparation of this Sustainability Report, the IOPG Report with 2015 data was not issued yet.

WATER USE

Our goal is to conserve and rationally use water resources. KPO regulates the use of clean water through implementation of the set of measures for water resources conservation, and re-use of treated water, wherever possible.

In 2015 the total volume of KPO water consumption was 481,684 m³, including 379,672 m³ of technical water and 102,012 m³ of potable water.

GRAPH №25 **KPO water consumption for 2013-2015**

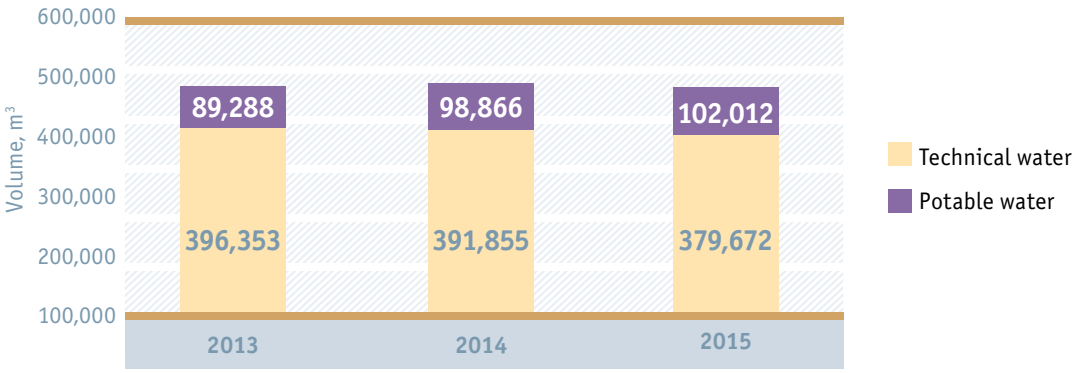


Table № 36 shows KPO's water consumption broken down by sources.

TABLE №36 **KPO's water consumption in 2013-2015 by sources, m³**

№	Source	Facility	Water quality	Consumption		
				2013	2014	2015
1	Zharsuat water intake facility	Karachaganak Field	potable	86,820	97,359	100,304
	Domestic needs			86,820	97,359	100,304
2	Serebryakovskiy water intake facility	Bolshoi Chagan OPS	potable	2,468	1,507	1,708
	Domestic needs			1,703	1,144	1,454
	Operational needs			765	363	254
3	Konchubai gully water pond*	Karachaganak Field	technical	391,752	389,026	377,020
	Operational needs			391,752	389,026	377,020
4	Kigach water intake facility	Atyrau OPS	technical	4,601	2,829	2,652
	Domestic needs			1,044	1,118	845
	Operational needs			3,557	1,711	1,807

** As per the RoK Special Water Use Permit for industrial needs, the limit is 578,904 m³.*

The source of water used by KPO for technical needs is Konchubai gully as specified in the Special Water Use Permit for industrial needs that sets water intake limits. In this case KPO is a primary water user. The water intake from other sources, such as Zharsuat, Serebryakovskiy and Kigach water intake facilities, is ensured though contracts with potable water suppliers. In these cases the Company is a secondary user.

Domestic water

KPO is the secondary user of water for domestic needs. The sources for KPO domestic water supply are: Zharsuatskiy water intake – for the Karachaganak field, Serebriakovskiy intake – for the Oil Pumping Station (OPS) in Bolshoi Chagan, and Kigach intake – for the Oil Pumping Station (OPS) in Atyrau Terminal.

In 2015 the volume of water consumption for KPO domestic needs totaled 102,603 m^3, which was 3% higher compared to 2014 (99,621 m^3).

Potable 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.

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.

Technical water

The main source of water supply for technical needs in the Karachaganak field is holding pond No.1 at Konchubai gully. As per the Special Water Use Permit for industrial needs for the rest of 2015, KPO is a primary user of technical water from this source with the annual intake limit of 578,904 m^3. The total volume of water intake from Konchubai gully in 2015 amounted to 377,020 m^3.

Konchubai gully is not included in 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. Konchubai gully is not fed by ground water; it is replenished during spring by melting snow and rainfalls.

In case of low amount of precipitations in winter, there is a risk that the water level, required for water intake for the KOGCF needs, will lower. In case of water shortage and in order to avoid the suspension of company operations, the Company has two backup wells No. W-9 and No. W-4 which are suitable for technical water supply.

The Kigach water intake supplies the Atyrau Terminal OPS with technical water through Astrakhan–Atyrau water line, where it is used for domestic and technical purposes.

In 2015 the volume of water consumption for technical needs totaled 379,081 m^3, which was 3% lower compared to 2014 (391,100 m^3).

In order to reduce fresh water intake for drilling mud preparation, watering of greenery, dust suppression on roads and construction sites and for drilling operations as well as to avoid interstratal break-ups, the Company uses treated domestic, industrial wastewater and storm runoffs.

The volume of treated technical water re-used by KPO in 2015 amounted to 8% of the technical water consumed from the Konchubai gully. Table № 37 below shows the KPO activities that utilize treated wastewater.

TABLE №37 **Reuse of treated wastewater in 2013-2015, m^3**

	2013	2014	2015
The total volume of reused treated wastewater, including:	64,343	123,419	31,213
For drilling and drilling mud preparation needs	33,579	108,799	23,744
Irrigation and hydrotests	13,335	2,555	-
Dust suppression	17,429	12,065	7,469

In 2015 the Company reused 31,213 m^3 of treated wastewater for technical needs, the most of which was used for making drilling mud. In 2014 the volume of reused wastewater, compared to 2015, was higher due to the treated domestic wastewater being used to refill the holding ponds at well № 9816D, which then were used to supply water for well drilling in the western part of the Karachaganak Field in order to avoid the hydraulic fracturing of the formation.

Discharge of treated wastewater

In 2015 KPO obtained three (3) Environmental Emission Permits – for the Karachaganak Field, Bolshoi Chagan OPS and Atyrau Terminal OPS. The 2015 Environmental Emissions Permit does not specify the limits for the wastewater discharge volumes. The limits, in tonnes, were determined for the concentration of contaminants. In 2015 the volume of discharged pollutants with the wastewater was as follows:

Facility	Limit, tonnes	Actual, tonnes
Karachaganak Field	31,915.92	14,780.25
Bolshoi Chagan OPS	6.37	1.81
Atyrau Terminal OPS	5.99	0.78

For treated domestic and industrial wastewater and storm runoffs KPO uses the specially built facilities – holding ponds (at KPC Pilot Camp), evaporation ponds (at the Atyrau Terminal and Bolshoi Chagan), seasonal ponds (at Unit-3), irrigation lagoons (at Unit-2). These facilities eliminate the possibility of migration of contaminants into soil and groundwater as well as collecting treated wastewater for their re-use for technical needs, thereby reducing fresh water intake.

The treated formation wastewater is injected into the subsurface formations of the Polygons 1 & 2.

Wastewaters generated by KPO activities and operations are not discharged into natural water bodies, Table № 38 below outlines the fate and disposal routes of wastewater streams. All wastewaters are treated and disposed of in conformity with the Maximum Permissible Discharge (MPD) Limits Projects for contaminants in these effluents.

In 2015 the MPD limits projects and wastewater quality monitoring schedules for the Karachaganak Field for 2016-2017 and for Bolshoi Chagan OPS and Atyrau OPS for 2016-2020 were developed and agreed by the regulatory authorities.

Table № 38 shows the KPO 2013-2015 discharge volumes with the indication of wastewater types and receiving facilities.

TABLE №38 **Total discharge volume with the indication of wastewater types and receiving facilities, m^3**

Receiving facility	Type of wastewater	2013	2014	2015
Holding ponds	Domestic wastewater	78,383	75,858	66,213
Wastewater subsurface disposal polygons	Process and formation wastewater	342,458	330,636	377,086
The Karachaganak Field terrain*	Industrial and storm wastewater, melt and rain water	5,090	-	-
Terrain of the OPSs in Bolshoi Chagan and Terminal Atyrau	Industrial and storm wastewater, melt and rain water	539	1,945	3,297
Total discharge volume		426,470	408,439	446,596

* *In order to reduce water intake from the surface sources and increase the volume of reused water, the discharge to the Karachaganak Field terrain was removed from the 2014 MPD Pollutant Limits Project.*

KPO monitors the content of contaminants in the formed and treated wastewater at its facilities, such as:

Domestic wastewater	Industrial and storm wastewater, melt and rain water	Process and formation wastewater
pH, suspended solids, oil products, ammonia nitrogen, nitrates, nitrites, BOD20 and BOD5, total ferrum, synthetic surfactants, sulphates, chlorides, phosphates, dry residue, dissolved oxygen	pH, suspended solids, oil products, dry residue	suspended solids, oil products, sulphides, sulphates, chlorides, hydrogen sulphide, methanol, ferrum, cooper, zinc, aluminum

Associated formation water, produced together with crude hydrocarbons, and process water are treated and injected into the deep-lying formations of the Karachaganak Field polygons. Wastewater injection is an internationally accepted practice for the disposal of wastewater avoiding the formation of salt-containing waste on the surface during the treatment. Due to the reliable water shutoff and soil properties which are ideal for preparation and injection of wastewater, the migration of water into upper aquifers is not possible.

The volume of injected wastewater was increased by 14% in 2015 compared to 2014; and the quantity of contaminants in the wastewater increased by 28%. The increase was caused by the high concentration of soluble salts in the formation water produced with hydrocarbons and consequently in the wastewater re-injected into the formation. The formation contains high-mineralized groundwater which is not used and cannot be used for drinking, balneological and process needs, irrigation or animal breeding. Accordingly, the injection has no effect on components of the environment such as soil, flora and fauna.

In 2015 14,782.84 tonnes of contaminants were discharged (28% higher compared to 11,544.49 tonnes in 2014). Out of this volume, 11,258.5 tonnes were standard discharges, and 3,775.54 tonnes – excessive. Excessive concentrations were recorded mainly for chlorides, oil products, ferrum, suspended solids, nitrates, sulphates, aluminum and phosphates. For the generation of excessive tonnes of contaminants the Company made a ten-fold payment according to the RoK legislation.

In 2015 the minor exceedance of MPC (maximum permissible concentration agreed with regulatory authorities) was observed in content of ferrum, nitrates and phosphates in domestic wastewater that was discharged into the holding ponds. Water from the holding ponds was used for irrigation purposes for which the permissible content of iron salts, nitrates and phosphates is much higher than for the limits set on water discharge. The injected wastewater mainly contained excessive concentration of MPC on chlorides and sulphates, and on rare occasions suspended solids and aluminum.

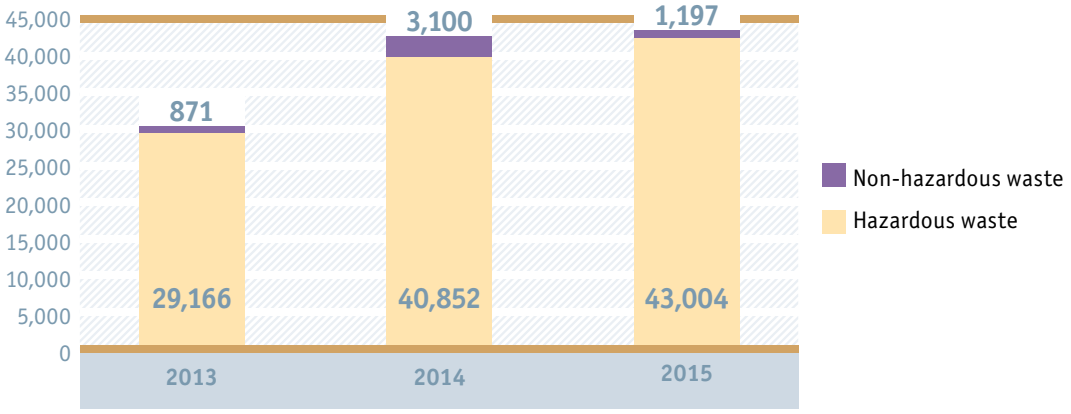
MANAGING WASTE

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

- waste recovery to process stream;
- waste treatment at the Eco Centre facilities;
- waste transfer to specialized contracted organizations, which sign contracts for waste disposal, treatment and removal with the receiving organizations;
- waste disposal at the KPO waste disposal sites;

The graph № 26 shows the dynamics of waste generation. In 2015 the quantity of KPO's generated waste totaled 44,201 tonnes.

GRAPH №26 **Waste generation dynamics at KPO facilities in 2013-2015, tonnes**



The quantity of waste generated at KPO facilities in 2015 was similar to 2014 amounts.

Waste treatment

Prior to disposal of waste at the landfill, it is treated at the Eco Centre facilities. This, in turn, reduces both the quantity and hazardous properties of the disposed waste. The recovery of waste to the process stream is the best possible way to re-use the waste.

Treatment of the production waste at KPO's Eco Centre facilities is an example of effective waste management with the use of available technologies reducing the amount of waste for final disposal and can be considered as best practice in the region.

	FUNCTION	PERFORMANCE IN 2015
THERMO-MECHANICAL CUTTINGS CLEANING (TCC) FACILITY	Treatment of oil-based drilling cuttings with the separation of base oil and water	In 2015, 18,227 tonnes of waste were treated; 2,759 tonnes of base oil and water were separated; and 15,750 tonnes of the treated waste at the TCC were disposed at the Solid Waste Burial Landfill.

In 2015 separation of base oil and water from the treated oil-based drilling cuttings allowed reducing the quantity of KPO's disposed waste by 15%.

Scientific research and trials initiated by KPO in 2013 in cooperation with the West Kazakhstan State University, Makhambet Utemissov on the alternative development of recycling methods of the carbonate drilling cuttings (CDC), yielded some positive results concerning the use of CDC in 2015:

1. As an activated mineral filler for making bitumen-concrete mixtures in construction of general purpose roads;
2. As an additive to the composite materials used to stabilize motor road shoulders;
3. As a bulk material for the mineralized fire breaks along the motor roads;

The approval documents were obtained from the competent state bodies and WKO authorities for carrying out additional pilot testing on the use of the carbonate drilling cuttings (CDC) waste at the Karachaganak field.

	FUNCTION	PERFORMANCE IN 2015
LIQUID TREATMENT PLANT(LTP) FACILITY	Treatment of liquid waste and wastewater for the reuse in making drilling mud and brines	In 2015, 9,430 tonnes of liquid waste were treated. Following the treatment, 6,109 tonnes of the reusable mud and brines were produced.

	FUNCTION	PERFORMANCE IN 2015
WASTE SEGREGATION UNIT	Sorting of the Company's municipal waste aimed at reducing the quantity of waste to bury through the separation of reusable components, such as paper, textiles, plastic bottles, glass, polyethylene, ferrous and non-ferrous metals	In 2015 out of 560 tonnes of solid domestic waste, sent for the segregation, 342 tonnes were sent to General Purpose Incinerator for incineration, 41 tonnes including waste paper, metal scrap and plastic was sent to the specialized organizations for recycling and reuse.

Specialized contractor organizations normally make their own decision on the further waste management methods once the waste is accepted from KPO. They report to KPO quarterly on the wastes handed over to third parties.

Collection of segregated waste paper in 2015 reduced the quantity of KPO waste sent to the municipal city dump by 16 tonnes. The waste paper was sent for recycling by the WKO local toilet paper manufacturer.

Waste disposal

Waste disposal at KPO's own facilities, specifically KPO's Solid Industrial Waste Burial Landfill at the Eco-Centre, is to international standard. Landfill cells are lined with geomembrane liners over clay layers to avoid any loss of waste or leachates to the environment.

In 2015 the waste accumulated in previous years were moved from the Solid Waste and Spent Drilling Mud Disposal Site to the KPO landfill sites to ensure safer burial. In the period from 2013 until the end of 2015 36% of the accumulated waste has been removed to the landfill locations.

TABLE №39 **KPO waste generated, treated, disposed and recycled in 2015**

KPO Methods of waste handling in 2015			Waste generated during the reporting period	Waste accumulated by the enterprise in the previous years	2015 recycling products (oil cuttings, oil-based drilling cuttings)	TOTAL
1. Incineration		Sent for incineration to the general purpose incinerator (GPI)	340	2	0	342
	Of which	Losses during incineration (including emissions)	299		2	
		Year-end balance at the facility	1		0	
		Disposed at the Landfill after incineration (RKI solid waste, RKI bag filter solid waste, GPI ash)	42		0	
2. Treatment		Sent for recycling to the rotary kiln incinerator (RKI), thermo-mechanical cutting cleaning facility (TCC) and liquid treatment facility (LTP)	24,837	14,129	797	39,762
	Of which	Reused after treatment (extracted oil base, treated brines and mud)	8,867			
		Further treatment and post-treatment	2,618			
		Further incineration of oil cuttings in the rotating kiln incinerator	2,990			
		Burial of treated waste at the Landfill (TCC solid waste, water-based drilling cuttings)	25,287			

Table № 39 continued

KPO Methods of waste handling in 2015	Waste generated during the reporting period	Waste accumulated by the enterprise in the previous years	2015 recycling products (oil cuttings, oil-based drilling cuttings)	TOTAL
3. Reuse (spent oils, cleaning fluid)		8		8
4. Burial at the Landfill without treatment	1,200	52,244	0	53,443
5. Accumulated by the enterprise (waste disposed in 2015 in silt areas, cells 35 A/B, waste disposal site, and remaining waste stored till the next 2016 year)	14,063	378	0	14,441
6. Waste handed over to the third party for further treatment, use, incineration and burial in 2015	3,754	1,530	0	5,284

The KPO waste is mainly produced during the well drilling and workover activities. It should be noted that the water or oil base of the drilling cuttings depends on the type of the drilling mud used for the well operations. In 2015, 36,719 tonnes of solid and liquid drilling waste were generated, which was equivalent to 83% of the total KPO waste quantity.

The table № 40 shows the main wastes produced during well operations broken down by waste handling methods. As it is seen from the table only water-based muds and cuttings are subject to disposal. Oil-based drilling cuttings can only be buried after the treatment and extraction of the oil base.

TABLE №40 **Waste produced from well operations in 2015 by waste handling method**

Waste description	Generated quantity, tonnes	Handling method
Spent water-based drilling mud	392	Treated at the LTP
	3,413	Disposal
Water-based drilling cuttings	1,199	Burial
	6	Thermal treatment in RKI
Spent oil-based drilling mud	2,216	Treated at the LTP and TCCF
	7	Thermal treatment in RKI
Oil-based drilling cuttings	17,688	Treated at the LTP by extraction of oil base, water and followed by the burial of the solid part
Spent brines	9,280	Treated at the LTP
	2,371	Disposal
Oil cuttings	133	Thermal treatment in RKI
	12	Treated at the TCCF

BIODIVERSITY

Conservation of biodiversity and ecosystems is one of the priority aspects in effective sustainable development. Many flora and fauna species inhabit the Karachaganak field area, including species on the International Union for Conservation of Nature (IUCN) and Kazakhstan Red Lists.

KPO always strives to conduct its operations with minimum impact on biodiversity and ecosystems in the Karachaganak field area. For this purpose, KPO carries out regular scientific research with regard to the conservation of biodiversity in the field. Research includes baseline studies of biological diversity and the assessment of effects that KPO operations may have on it. This is a key requirement in KPO's Biodiversity Conservation Plan (BCP). The key purpose of the BCP is to conserve flora and fauna species and their habitats in KOGCF in coordination with KPO activities and the use of land by other stakeholders in this area. The BCP developed by KPO in 2011 specifies activities on the monitoring and keeping records of biodiversity around the area where the Company performs its operations.

The 2013 and 2014 Sustainability Reports described our activities on the two work phases according to the BCP. The first phase was completed in 2012, the second in 2013. The results of works performed in 2012-2013 show that the KOGCF operations have no negative effects on biodiversity. To ensure further tracking of changes in the species and numbers of animals and plants that inhabit the KOGCF area, KPO continues monitoring flora and fauna to assess the potential impact that company operations may have on biodiversity.

In 2014 the Company developed the Biodiversity Conservation Plan for 2015-2016. In 2015 the following activities were implemented as part of this Plan:

- Mapping of air emissions spread within the KOGCF and of the content of contaminants in the soil;
- Study of species and numbers of animals (mammals, birds, amphibians, reptiles) in KOGCF to evaluate potential risks from KPO operations and identification of its dynamics;
- Study of important species of animals including beavers in the areas of Konchubai gully and Berezovka river;
- Update of the database on fauna species inhabiting the KOGCF area following the results of fauna monitoring.

When conducting the studies in 2015, the special focus was made on the valued animal species. The valued species category includes all animals, study and conservation of which is highly essential for the KOGCF area. Table № 41 shows the main important species recorded within the KOGCF during the studies carried out between 1990 and 2015. All these species can also be found beyond the KOGCF.

It is vital for KPO to consider these species when planning and implementing activities in this region, however it should be noted that the presence, absence or number of these species within the field is not a direct indicator of the environmental well-being of the area. In order to assess the condition of biodiversity, it is practical to consider the ecosystems in whole as a complex geographical unit. The population of certain species can be affected both by the local and global factors which have no relation to KPO activities. Any changes in the number of such species must be studied in the wider scale of development dynamics of the species population.

However, KPO plans and manages its operations with efforts to avoid direct and indirect impact on the population of certain species, including the key ones that require additional conservation measures towards rare and endemic species.

TABLE №41 **Species essential for the nature conservation recorded within the KOGCF area**

№	Species	IUCN category	Kazakhstan Red Data Book	Local rare species (in KOGCF)	Year of record
	FLOWERING PLANTS				
1	Dianthus andrzejowskianus	-	KRDB	✓	2008, 2010
2	Tulipa biebersteiniana	-	KRDB I	✓	2007, 2008, 2010, 2013, 2015
3	Pulsatilla patens	-	-	✓	2010, 2015
4	Fritillaria ruthenica	-	-	✓	2010, 2013, 2015
5	Tulipa shrenkii	-	KRDB	✓	2007, 2008, 2010, 2013, 2015
	BIRDS				
6	Demoiselle crane (Anthropoides virgo)	-	KRDB VI	✓	1990, 1991, 2003, 2004, 2005, 2008, 2010, 2015
7	The Eurasian eagle-owl (Bubo bubo)	LC	KRDB II	–	1991
8	The Eastern imperial eagle (Aquila heliaca)	VU	KRDB III	✓	2002, 2003, 2010
9	The European roller (Coracias garrulus)	NT	-	✓	2001, 2010
10	The lesser kestrel (Falco naumanni)	LC	-	✓	2004
11	The little bustard (Tetrax tetrax)	NT	KRDB III	✓	1990-1991, 2002, 2004, 2008, 2010, 2015
12	The mute swan (Cygnus olor)	LC	-	✓	2003, 2004, 2008, 2010
13	The osprey (Pandion haliaetus)	LC	KRDB I	–	1990
14	The pale harrier (Circus macrourus)	NT	-	✓	2002, 2003, 2004, 2005
15	The red-footed falcon (Falco vespertinus)	NT	-	✓	2001, 2002, 2003, 2004, 2005, 2008, 2010, 2015
16	The steppe eagle (Aquila nipalensis)	LC	KRDB VI	–	2002, 2008, 2010
17	The white-tailed eagle (Haliaeetus albicilla)	-	KRDB III	✓	2004, 2008, 2010, 2015
	MAMMALS				
18	The Eurasian beaver (Castor fiber)	-	-	–	2003, 2005, 2008, 2010, 2012, 2015
	REPTILES				
19	Vipera ursini renardii	VU	-	✓	2001, 2002, 2003, 2008, 2010
	INSECTS				
20	The emperor dragonfly	-	KRDB	–	2010
21	Bolivaria brachyptera (mantis)	-	KRDB	–	2010

The 2015 studies and annual analysis of species' numbers have not revealed any negative impact of the KPO operations on the life activities of the wild populations in the Karachaganak Field. On the contrary, in spring 2015 a large colony of gray herons was noticed in the Konchibai gully bridge area, as well as a single great white heron that appeared in the area – a rare species for this latitude. Besides, the number of certain mammals observed has increased. The number of European beavers within and in the vicinity of the KOGCF area remains high. All of those point to the fact that the conservation conditions in the Field are favorable to the life of local fauna.

In 2016 the Company plans to conduct additional studies on KOGCF flora conservation, including:

- monitoring of plants in the KOGCF impact area against the four influencing factors;
- further study into the distribution of the rare Fritillaria ruthenica that grows in the areas Konchubai gully and Berezovka river;
- update of the flora database following the plants monitoring.

The following categories are used in the table № 41:

- ***NT: Near Threatened*** *– usually species whose populations are declining to the extent that they will soon qualify for a higher IUCN threat category. IUCM is the International Union for Conservation of Nature and Natural Resources.*
- ***VU: Vulnerable*** *– species that are facing a high risk of extinction in the wild.*
- ***C: Least concern*** *– species evaluated against the IUCN criteria that do not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category (species in this group are not included in the count of internationally rare species).*
- ***KRDB: 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: Category I – the rarest species, and Category V – the least rare.*

SOCIAL AND ECONOMIC IMPACT

SUPPORTING SOCIAL INFRASTRUCTURE

Working towards sustainable development, KPO continues implementing social and infrastructure projects in the West Kazakhstan Oblast. Under the terms of Annex 5 to the Final Production Sharing Agreement, KPO has been fulfilling its obligation to allocate USD 10 mln for social infrastructure projects agreed with West Kazakhstan Oblast (WKO) Akimat that has been identifying the list of priorities of social development.

As it was communicated in our previous Reports, since 2010 up to date, KPO has been annually allocating USD 20 mln per year for social and infrastructure projects in the WKO following the decision by the Joint Operating Committee (JOC).

Additionally, in 2014, it was decided to allocate an additional annual funding of USD 10 mln exclusively for social and infrastructure projects in Burlin district of the WKO during the period from 2014 to 2016.

According to Annex 5 of the FPSA, in case of failure to implement the projects by the end of the year, unspent funds are carried over to the next calendar year.

KPO initiates implementation of the projects, which are approved between the WKO Akimat and KPO by a JOC Resolution mechanism. KPO is responsible for project design, procurement and management of the whole process up to completion of construction and the subsequent handover to the Republic of Kazakhstan. All social projects are to be implemented by local companies.

The list of social projects done in 2015 is provided hereunder in Tables №№ 42 and 43.

TABLE №42 **Social infrastructure projects in Uralsk completed by KPO in 2015**

Project name	Project description	Actual costs (mln KZT*)
CONSTRUCTION OF ARTS CENTRE AFTER KADYR MIRZA-ALI	The Arts Centre hosts meet-the-artist sessions and events: concerts, performances of masters of arts, exhibitions of art works. Also, the project covers a library with collection of works of poets and writers of the region.	**991.4**
REPAIR OF ROAD AT SARAISHYK STREET	The project foresees maintenance of the existing roadway pavement and construction of a new one, repair of sidewalks in Sarayshyk street, one of primary streets in Uralsk.	**397**
REPAIR OF ROAD AT SYRYM DATOV STREET	The project covers repair of pavement in Syrym Datov street and the bridge across the Ural river, reconstruction of original riding grade of the pavement and repair of guard rails and sidewalks.	**620.4**
RENOVATION OF THE PEDESTRIAN BRIDGE OVER CHAGAN RIVER IN THE PARK OF CULTURE AND RECREATION	The bridge in the Culture and Recreation Park is designed to provide a pedestrian traffic across the Chagan river.	**91.1**
	Total	**2,099.9**

Repair of pavement of the bridge across the Ural river on Syrym Datov Street in Uralsk

TABLE №43 **Social infrastructure projects in Burlin District and other districts of WKO completed by KPO in 2015**

Project name	Project description	Actual costs (mln KZT*)
CONSTRUCTION OF A KINDERGARTEN FOR 290 CHILDREN IN ZHANIBEK DISTRICT	The kindergarten is designed as a two-storey building for 290 children, and includes 13 play grounds with sunshades and gaming equipment, sport ground and garden plot. The building is fully equipped and furnished on a turn-key basis.	550.1
UPGRADING OF KONECHNAYA STR FROM IKHSANOV STR TO OVRAZHNAYA STR IN AKSAI	The project foresees improvement of the quality of road surface, repair of existing and construction of a new road pavement. The project aims to restore the original performance indicators of road pavement.	152.5
UPGRADING OF OKTYABRSKAYA STR FROM ABAI AVENUE TO VASHUK STR IN AKSAI	The project is aimed at restoration of the original capacities of the road pavement and repair of barrier fences and sidewalks, improvement of the city infrastructure.	240.4

Art centre after Kadyr Myrza-Ali

Table № 43 continued

Project name	Project description	Actual costs (mln KZT*)
REFURBISHMENT OF CENTRAL DISTRICT HOSPITAL IN AKSAI	The project foresees major repair of the main building of the hospital, household facilities, replacement of heating networks, water supply line, etc. Renovated building of the Central Hospital will provide healthcare services to the residents of Burlin district and improve the quality of medical support in the area.	763.2
CONSTRUCTION OF WATER PIPELINE IN ZHANATALAP VILLAGE OF BURLIN DISTRICT	The project foresees construction of water pipeline for the villagers and supply of running water to houses, arrangement of water supply to Akimat, hospital, school, cultural centre with installation of metering devices.	144.2
RECONSTRUCTION OF WATER SUPPLY SYSTEM IN KANAY VILLAGE OF BURLIN DISTRICT, WKO	The project is aimed at improvement of the water supply system in Kanay village, conformity of supplied water to the sanitary standards, arrangement of centralized water supply system that will support development of the village.	156.2
	Total	2,006.6

**Amounts are VAT including.*

Note: The social infrastructure projects, which are in progress within 2016 and will be completed by the end of the year, will be reported in the 2016 issue.

COMMUNITY ENGAGEMENT

Our strategy in working with local communities

KPO works to prevent or minimize the negative impacts and maximize the benefits from our presence by strengthening our engagement with local communities, thus creating opportunities for society development.

In 2015 KPO issued the Social Performance Plan aimed at alignment of the Company's business objectives with government programs and needs of the local communities located in close proximity to its operational activities. The Social Performance Plan sets out how we consider the communities' interests and support their development priorities with the aim to address possible social risks.

The KPO Social Performance Plan involves implementation of programs in education, health, social support of vulnerable community groups: war and labor veterans, the disabled, children with disabilities and facing hardship. Moreover, this Plan provides consultation of local communities on environmental issues, monitoring of the grievance and suggestions procedures.

TABLE №44 **Our targets in the area of engaging with local communities**

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
Obtain approval for the 2015 budget for community development programmes within Q1, 2015 and develop a Social Performance Plan for 2015	YES	The 2015 Social Performance Plan was issued in June 2015 and implemented by 100%. A triateral memorandum of Understanding and Cooperation with Burlin Akimat, Maslikhat and KPO was signed.	Obtain approval for the 2016 budget for community development programmes and develop a Social Performance Plan for 2016
Meet with the Village Councils on a quarterly basis to exchange information on KPO activities	YES	18 Village Councel meetings held with local communities of 5 rural districts of Burlin District located around the Karachaganak Field. The topics of the meeting related to KPO social programmes and environmental issues.	Meet with the Village Councils on a quarterly basis to exchange information on KPO activities
Continue the monitoring of the KPO Community Grievance and Suggestion Management Procedure	YES	Monitoring of KPO Grievance Procedure was continued in 2015. KPO received 35 grievances from local communities during 2015, 22 of which related to odour complaints. Most of grievances were dealt in accordance with the Procedure providing a timely feedback.	Continue the monitoring of the KPO Community Grievance and Suggestion Management Procedure
Issue the 2014 Sustainability Report in line with GRI G4 Guidelines	YES	The 2014 Sustainability Report was issued in line with GRI Guidelines 4.	

Table № 44 continued

Our 2015 targets	Target achievement	Actions taken in 2015	Targets for 2016
	NEW TARGET		Implement the second phase of the project on resettlement of communities of Berezovka and Bestau in 2016 in accordance with applicable RoK legislation and international standards

Constructive dialogue

Meetings and consultations are the fundamental basis of KPO activity in the area of corporate social responsibility. In 2015 we held a number of consultations and meetings with local communities, in the format of the established Village Councils in the four rural districts around the Karachaganak Field and public hearings. The existing dialogue with local communities allows KPO to answer their questions, discuss suggestions and initiatives as they arise, helping to address concerns of the local communities.

In particular, KPO held 18 meetings with the Village Councils in 2015. At these meetings the members of the Village Councils and KPO Community Relations department discussed the community development programs.

In February 2015, KPO specialists presented to the population of each rural district a detailed report on the implementation of the KPO Social Performance Plan for 2014. Following the approval of the 2015 budget, in April KPO discussed the 2015 Social Performance Plan with the communities. Suggestions and requests of the villagers were recorded in relevant Minutes of meetings and were taken into account during the implementation of the mentioned Plan. For example, to support a suggestion of Zharsuat, Berezovka and Uspenovka rural district's Akims to help children from socially vulnerable families, a charity football match was held in October 2015 fostered by KPO senior management to raise funds for purchase of warm winter clothing, shoes and food products for the nine children from socially disadvantaged families. More initatives are presented further.

Public consultations

In 2015, with the support of Akimat of the Burlin district, KPO held two public hearings in Aksai where the Company presented to the local communities, authorities and the general public its Environmental Protection Measures Plan (EPMP) for the period July-December 2015 and for the full year 2016.

The EPMP was developed in accordance with the requirements of the RoK Environmental Code and as part of KPO's obligations for environment protection. The Plan provides for a wide range of technological, technical, logistics, social and economic measures aimed at the protection and improvement of environment. This includes reducing emissions of pollutants and greenhouse gases into the atmosphere, the rational use of energy resources, restoration of soil contaminated by drilling of wells and construction of industrial facilities, management of industrial wastes. And finally, the Plan will help restoring the population of rare species of flora and fauna inhabiting the Karachaganak field and neighbouring areas.

The public hearings were attended by representatives of regional Maslikhat and Akimat of the Burlin district and the Field-adjacent communities, members of the public, local initiative groups and the media.

At the Village Council

Environmental Survey

At the end of 2014 KPO completed the environmental surveys of the quality of vegetable crops, soil and water, as well as the physiological state of the livestock in Berezovka village mentioned in our Sustainbaility reports for previous years.

The final study results showed that the environmental conditions of Berezovka village do not differ from those in Dolinnoye village, which was selected as the control settlement and is located at a distance of 80 km from the KPO production facilities.

Dealing with grievance and suggestions

KPO has a formal policy in place for handling complaints related to the KPO operational activities. Any resident of the neighbouring villages has the right to raise a complaint, either verbally to a KPO Community Liaison Officer or in writing using dedicated forms and boxes installed in all the villages. Then the company considers a grievance/suggestion and makes a proposal to resolve it.

Along with that, KPO has a robust air quality management system in place which is described in detail in Environmental Monitoring section.

In accordance with the KPO's "Community Grievance and Suggestion Management Procedure", 35 grievances were lodged within 2015, of which:

- 22 were related to odour complaints with most of them coming from the residents of the Zhanatalap Village (detailed description of the review process is given further as the text goes);
- 10 were ineligible with criteria for community development projects;
- 2 were related to employment opportunities;
- 1 grievance was about a contractor organisation's specialist's poor performance.

Communities' odour complaints are given in the table № 45:

TABLE №45 **Registered grievances from the local communities in 2015**

Village	Number of grievances	Dates of registration of grievances in 2015
Bestau	1	10 February
Berezovka	1	8 August
Karachaganak	1	12 January
Uspenovka	2	22 January; 26 October
Zhanatalap	15	6, 15, 21, 26 January, 20 February; 13*, 23 July; 18, 19 September; 15 October; 3 November; 8, 10, 23 December
Zharsuat	2	15, 23 July

Note: On 13 July 2015, 2 grievances from the residents of the Zhanatalap village were registered during the day.

All the aforecited grievances related to odour complaints were thoroughly reviewed and appropriately closed by KPO with obtaining the prior agreement of complainants, either by phone or face-to-face meetings with KPO Corporate Environment, Emergency Response Team, and Community Liaison specialists.

The provided information was based on the data from Environmental Monitoring Stations (EMSs) installed at various locations around the boundary of the Sanitary Protection Zone (SPZ). Concentrations of monitored air emissions did not exceed the maximum permissible concentration (MPC), defined in national regulations.

KPO conducts a full-scale environmental monitoring in accordance with the program of industrial environmental control (IEC). For more information, please see the Environment chapter of this Report, providing details about the results of the monitoring stations on the atmosphere and the concentration of gases in the air.

Illnesses of schoolchildren in the Berezovka village

As mentioned in our Sustainability Report 2014, in November 2014, a number of schoolchildren and teachers in the village of Berezovka, located approximately five kilometres from the Karachaganak Field, fainted and were hospitalised. Some NGOs and media alleged that emissions from KPO were the cause. The issue received coverage in the national and regional media.

The national and regional governments commissioned investigations into this incident. KPO fully cooperated with the government investigations. On January 20, 2015 RoK officials disclosed the findings of the commission's independent investigation. Their results concluded that there is no evidence that the emissions from KPO's operations were the cause of the faintness which has affected the children living in the village of Berezovka.

Resettlement of the Berezovka and Bestau villages

In May 2015 the Ministry of National Economy of the Republic of Kazakhstan issued a Positive Conclusion on the expansion of the Sanitary Protection Zone around the Karachaganak field, in order to support the future development of the KPO operational facilities.

On 28 July 2015 the Government of the Republic of Kazakhstan adopted a Resolution on the resettlement of Berezovka and Bestau communities falling within the expanded sanitary protection zone. The resettlement process was scheduled to be performed with strict compliance to the Final Production Sharing Agreement (FPSA), the existing RoK legislation and the applicable international standards on resettlement – Performance Standard 5 of the International Finance Corporation (IFC PS5).

The resettlement of the two villages is being led by the WKO Regional Authorities and KPO consortium funding the resettlement project. A special Resettlement/ Grievance Commission comprising the representatives of Burlin District authorities, Maslikhat Members, KPO representatives and public organisations was set up to review the grievances and applications for resettlement lodged by residents of Berezovka and Bestau communities.

The resettlement will occur in two phases with early resettlement to Aksai town of representatives of the socially vulnerable population who volunteered to move within the Phase 1, which was undertaken at the end of 2015.

Open Days in Bestau, meetings with the residents of village

During the selection process for the Phase 1 the priority was given to disabled people, participants of the Great Patriotic War (WW II), disabled people of categories 1 and 2, families with disabled children and persons suffering from severe forms of chronic diseases included into the list approved by the Government of the Republic of Kazakhstan.

By the end of 2015, 82 households from Berezovka and Bestau moved into two new multi-storey blocks of flats in Aksai.

The resettlement options for Phase 2 will occur upon completion of construction of the new apartments in multi-storey blocks of flats in Aksai and detached houses in Araltal village.

The resettlement project has undertaken a number of communications and consultations with village residents. In August 2015 KPO held community consultations in the format of Open Days. Over 600 residents in Berezovka and Bestau communities attended those meetings. During these meetings the representatives of local authorities, KPO and the independent consultants provided presentations on all proposed options for resettlement, including one-on-one discussions with the residents with the use of information boards and leaflets on resettlement process.

In October 2015, local authorities jointly with KPO posted communication brochures and leaflets in public places in Berezovka and Bestau communities, which describe the layouts of the apartments and houses proposed for Phase 2 of the resettlement.

Citizens of Berezovka moved to new apartment

In October – early November 2015 the individual meetings with all the households eligible for resettlement within the Phase 1 were held in Berezovka and Bestau communities involving the members of the above mentioned special Commission on Resettlement. During those meetings the individual household members had the opportunity to ask specific questions about the apartments proposed for resettlement, the types of compensations to be paid, the salvaging and so on.

A grievance to the Organization for Economic Cooperation and Development (OECD)

As we mentioned in our Sustainability Reports for 2013 and 2014, in the middle of 2013 the National Contact Point for OECD in UK, Italy and the US were approached by Crude Accountability accusing the KPO Parent Companies (BG, Eni and Chevron) of alleged violation of human rights of the Berezovka community. KPO replied with a comprehensive comment on 19 August, 2013. The UK OECD National Contact Point (NCP) dismissed the majority of the allegations but "decided to accept for further examination issues raised with regard to the households living within the protective zone around the facility..."

The UK NCP proposed conciliation / mediation process to the parties to investigate the limited issue of resettlement of two households (formerly) situated within the KPO's sanitary protective zone (SPZ). The proposed mediation was accepted by KPO and its Parent Companies. Three mediation meetings took place in 2014, however no agreement was found between the parties .

At the end of 2015, KPO provided further information to the NCP as per the latter's request. It is expected that the NCP will issue its Final Assessment in 2016 .

Community preparedness

In ensuring effective emergency response, KPO maintains close cooperation with local executive bodies and local agencies of the Burlin District on civil defence and industrial safety. In 2015, these authorities jointly with KPO developed the Guideline on the use of the Environmental Monitoring and Communications system. Following the monthly schedule, the Village alarm stations using audible sirens were tested during the year 2015.

In addition, throughout the year the KPO specialists continued providing consultation to local authorities, farmers, community members on the use of the community emergency alarm system. On the whole, the meetings with over 600 community representatives were conducted. Also, with support of the rural districts' Akimats KPO specialists conducted meetings with 431 residents of 51 villages, located along the export pipeline KPC-Bolshoi Chagan-Atyrau on the issues on emergency response and emergency interaction.

In order to ensure efficient operation of all emergency response systems, KPO conducts regular exercises in villages in accordance with evacuation activities plans. As per recommendations of the regional Emergency

Situations Committee of the Burlin District Akimat the priority is given to communities located in the immediate proximity to the Field and with greater number of population with account of trans-border location of village.

Aiming to improve the functioning of the village alarm system in 2015 the pilot project on assembling and installation of loud speaking communications system was set in Berezovka village for transmission of voice messages.

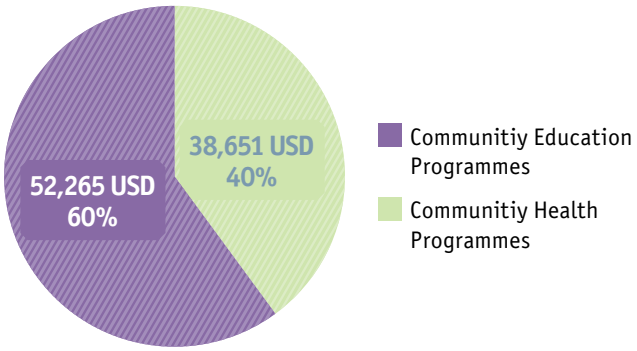
Community development projects

Improving livelihoods is a key aspiration for the communities around Karachaganak, and KPO strives to be supportive of these aims, complementing the efforts of the local authorities and contributing to the long term economic 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 received proposals, assessing their alignment with the community needs, overall priority, technical feasibility and the associated budget.

The graph № 27 shows KPO investment into the development programmes for the local communities in 2015.

GRAPH №27 **Investment into the Local community development programmes in 2015, USD**



The initiatives KPO implemented in 2015 to support the local communities in the area of healthcare, education and arts are presented further:

Social support to the elderly and children

One of the most important projects implemented in the framework of the social support for the local community is arrangement of health resort treatment and recreation for pensioners and summer camps for schoolchildren living in the villages around the Karachaganak field (Berezovsky, Uspenovsky, Zharsuatsky, Priuralny, Pugachevsky rural districts of the Burlin District).

In 2015, KPO provided vouchers to Akzhaiyk Sanatorium for around 200 pensioners and veterans of the II World War and Labour in the Burlin District. About 150 schoolchildren from the above mentioned rural districts, spent 10 days in the Talap Summer Camp in Uralsk.

In addition, in 2015 KPO presented 100 bagpacks wih essential stationary for the schoolchildren from low income families on occasion of the Knowledge Day and 1,186 sweets sets for children (from birth to 14 years) for the New Year.

Honoring of veterans on Victory Day

Since 2003 following a tradition, KPO Community Relations team greets the II World War veterans and their widows living in the villages around the Karachaganak Field. In 2015, KPO donated 14 food baskets to the veterans of war and their widows on occasion the 70th Anniversary of the Victory Day in the II World War.

Education

KPO's social performance programmes for local communities are also aimed at development of local youth. Long-term investment into the human capital helps addressing the strategic goals of the business, whilst supporting the economic growth of local communities. KPO's Community Scholarship Programme and support to Zhas daryn Public Foundation described in the 2014 Sustainability Report were continued in 2015.

OUR ECONOMIC CONTRIBUTION

KPO cooperates with a large number of contractors, vendors and counterparties both in Kazakhstan and worldwide to ensure delivery the best goods, services and works for the Karachaganak operations. We acknowledge the impact of our presence in the West Kazakhstan region and contribute to local sustainability goals through local content development and procurement opportunities.

Supply chain

KPO activities in the procurement of goods and services are carried out in accordance with approved Tender Procedures and the Final Production Sharing Agreement (FPSA). Procurement is carried out through tenders following the principles of competitiveness, objectivity and confidentiality.

The procurement planning process includes strategic planning of detailed activities in terms of expenses and cost savings, target reserves and quality. The contracting strategy is aimed at identifying the required actions to ensure relevance of procurement needs for KPO departments in compliance with regulations and policies.

The category and vendor management system is aimed at implementation of contractual work and procurement in compliance with KPO requirements in terms of ethical principles, local content and financial stability.

The process of requisitioning begins with a KPO department's inquiry to the Contract and Procurement Department (C&P) with the request to start the procurement process aiming to receive goods and/or works and/or services.

The phase of tendering and awarding covers the processes of requisitioning, the process of identifying and inviting suitable suppliers to participate in a tender, the analysis of received proposals and contract awarding and conclusion stages.

Hereinafter, the process of contract management and administration defines roles and responsible parties for contract execution, including a contract holder, contract administration specialist, and participants from C&P department.

The final feedback review on the contractor's performance provides an assessment of contractual performance, including the quality of services rendered, commercial management, HSE, cooperation with KPO, etc. The review provides a possibility to update and revise the qualification status of the supplier.

Since the beginning of the Karachaganak project development and up to end of 2015, 7,673 potential suppliers of goods, works and services have been registered in the KPO Vendor database. In total, 499 companies were registered in 2015, 242 companies were assessed for ethical due diligence.

According to the 2015 results, KPO placed 1,787 contracts and amendments worth over USD 1,1 bln. In 2015, the contracts and amendments were awarded to more than 597 suppliers, of which 341 (57%) were the local vendors (registered in the Republic of Kazakhstan) and 256 (43%) were the foreign ones.

According to the procurement categories in 2015, KPO signed 1,160 contracts for supply of goods worth over USD 166 mln and 627 contracts for provision of services worth over USD 998 mln.

KPO attracts a large number of contractors to perform the major works and services at Karachaganak, including construction, drilling operations, transportation and maintenance services.

Major contracts for delivery of goods include the following main categories: tubular products, compressors, various valves, flow wellhead equipment, heat exchangers, electrical equipment and spare parts to all the above listed equipment.

Major contracts for provision of services include the following types: construction, catering services, maintenance and repair of gas re-injection compressors at Unit 2, maintenance and repair of gas turbine station at KPC, logistics and freight forwarding services, drilling and well operations, recruitment services, security services, and ancillary services during scheduled shutdown activities, etc.

Major contracts for provision of services in 2015 were signed with the companies registered in Kazakhstan, as noted above. However, the geography of the countries, with which contracts for supply of goods and services have been signed, is quite diverse. Besides Kazakhstan, these include Italy, UK, France, Hungary, Germany, UAE, Russia, USA, Netherlands, Czech Republic.

Local content development

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 domestic goods, works and services as the proportion of those procured by the Karachaganak partners for operations in Kazakhstan.

KPO Local Content Policy aims to support businesses in the Western Kazakhstan region and across the country by pursuing the following objectives:

- Improved access to KPO current operations and expansion projects through transparency and communication;
- Increasing the skills and capabilities of local manufacturers and suppliers, thus creating healthy competitive environment;
- Identification of localised goods, works and services to be tendered only amongst local companies (Kazakhstan tenders).

In order to enhance the transparency of our procurement process, annual, medium and long-term procurement plans are posted on the company's website. Additionally, information on the preliminary assessment and registration of suppliers in the Company's database is updated on the website in order to disclose the bidding requirements. This allows local companies to develop their own bidding strategies such as to meet KPO requirements.

In line with its Local Content Development Program, KPO supports the national and sectorial development programmes. In 2015, KPO carried out several Local Content development initiatives based upon the following fundamental agreements:

- Aktau Declaration signed in September 2012 jointly with Tengizchevroil, North Caspian Operating Company and the National Company KazMunayGas;
- Memorandum of Understanding (MoU) on the national industrial development signed in July 2014 between the KPO, PSA and KazEnergy Association;
- Memorandum of Understanding signed in December 2015 with Karagandy Oblast Akimat.

KPO Management visits "Zhigermunaiservice", a machine building plant in Atyrau

Additionally, throughout the year KPO conducted a number of dedicated forums and workshops:

- Steel fabrication facilitation workshop involving WKO and international producers of structural steel and piping in the Western Kazakhstan for the needs of the Karachaganak Expansion Project Phase 1 (KEP-1) held in June 2015 in Uralsk;
- Technical Workshop for general maintenance service providers conducted in August 2015 in Uralsk;
- Joint Supplier Forum in the framework of the Aktau Declaration organised in October 2015 in Almaty;
- Electrical Workshop to facilitate partnerships between the local and international producers for electric equipment and cables production for KEP-1 needs held in November 2015 in Almaty;
- KPO Forum for Karagandy Oblast companies conducted in December 2015 in Karagandy.

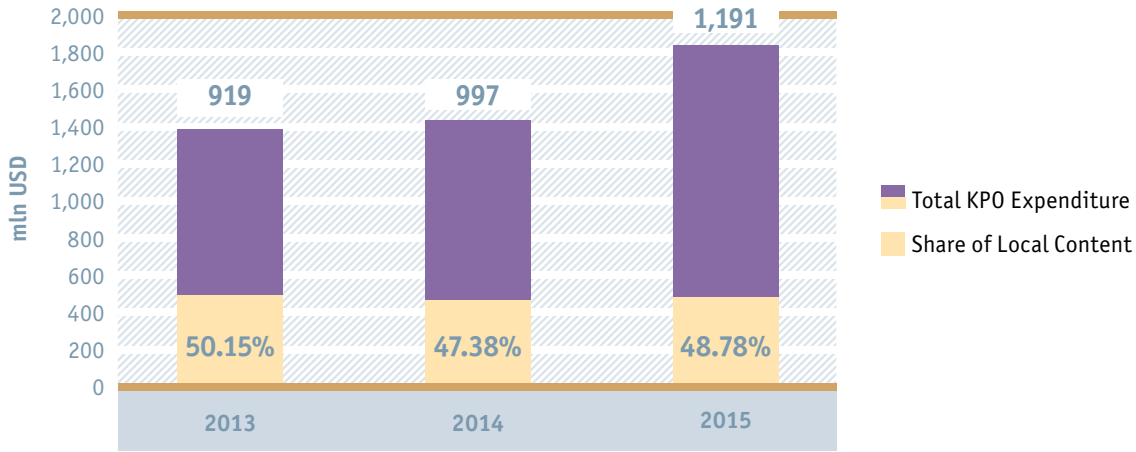
In a bid to fulfil its obligation under the FPSA and Local Content Policy, KPO seeks to maximize local content in its operations without compromising HSE, quality and efficiency. To help meet stringent technical standards set by the Venture, KPO has offered a dedicated training that would eventually improve the skill base of local vendors and enhance their competitiveness within the oil & gas industry.

As part of the vendor development activities, a number of pre-qualification and procurement process introduction and awareness sessions were conducted for some 125 local companies at Local Content workshops. Also, in the fourth quarter 2015 63 training courses on ISO Management systems compliance (9001, 14001, 18001, 29001) and Project management (IPMA) were conducted for 30 KPO local contractors aimed at increasing their competitiveness and business skills.

As reported in previous years, KPO continues facilitating partnerships between international and local companies for the development and localisation of specific focus commodities. This approach is expected to be effective to proceed in the context of the local content development.

In 2015, the local content share in the Karachaganak project made up to 48.78% (USD 581 mln), as shown in the graph below.

GRAPH №28 **Share of Local Content out of total KPO expenditures, 2013–2015**



National industry development

KPO finds it extremely important to support the fabrication of new goods, works and services (GWS) in Kazakhstan; to encourage the continuous development of local companies; to facilitate their capacity building; to enhance competencies and to help ensuring their compliance with the international standards.

Projects on production localization imply a mutually beneficial cooperation between the foreign and local manufacturers, stimulate the growth of domestic investment, create new jobs and have a positive impact on the socio-economic development of the region. Examples of such projects are given hereunder.

№ 1 CASE STUDY:

Implementation of Early Tenders and Trial Orders (ET/TO) under the Memorandum of Understanding (MoU) on national industry development

Aim

To support the development of new goods and services through establishing new production facilities or upgrading of existing facilities in the Karachaganak Field thereby facilitating new employment opportunities for the local citizens.

Approach

To support the RoK Government initiatives for the development of production and service clusters, and taking into consideration possible growth of demands for the Karachaganak Expansion projects, KPO, PSA LLP and KazEnergy Association have entered into the Memorandum of Understanding on national industry development dated 9 July 2014 for identification of goods, works and services (GWS) at early stages of the KPO projects, setting GWS clusters and conducting Early Tenders and/or Trial Orders amongst local suppliers. This will provide local suppliers with time and opportunities for the development of the new goods, works and services in Kazakhstan.

Result

The MoU parties established the Working Group (WG) to identify GWS localisation opportunities. This Working Group reviewed and identified 15 types of GWS with potential for localisation and could be long lead items for KPO to start pilot Early Tenders and/or Trial Orders. The identified 15 GWS were split into three (3) batches – short, middle and longer term. The mandatory requirement for Early Tenders and/or Trial Orders is that GWS are made in Kazakhstan. In 2015, KPO started implementing actions for Batch 1. For each case on Early Tenders and/or Trial Orders KPO held clarification meetings with potential local suppliers to explain the purpose of the MoU, the principles of Early Tenders or Trial Orders and KPO technical requirements for each type of goods and materials in order to help local companies be ready to participate in Early Tenders and/or Trial Orders.

In the framework of the Batch 1, KPO issued Early Tenders for procurement of:

- Personal Protective Equipment (PPE);
- Fencing and gates.

Trial Orders are planned for implementation in procurement of:

- Drill bit made in Kazakhstan initiated with expected field test in second quarter 2016;
- Barite samples procured from local suppliers for testing in laboratories and field tests;
- Possibility of supply of locally produced oil well cement was investigated;
- Locally produced caustic soda samples tested positively.

№ 2 CASE STUDY:

Well Operation roadmap initiative

Aim

To promote and foster the development of partnership between the RoK national companies and international contractors for some well-related services

Approach

For a number of selected services, identified Well Operation services providers were invited in the pre-tender phase to consider the possibility of creating a consortium or any other form of cooperation / partnership with the RoK national companies to increase a capability in well operations support services.

Result

KPO currently has issued competitive tenders for the following Well Operation services, with mandatory requirement of local ownership or partnership:

- fluids,
- well testing,
- coil tubing,
- tubular running,
- mud logging,
- drilling rig.

KPO plans to commence additional tenders for drilling rig in future. Average duration of contracts is 3 years with optional extensions.

Such strategy has led to forming 16 partnerships between the local and international companies for tendering Well Operations services.

Aktau Declaration on Joint Actions of oil and gas operators in Kazakhstan

In our previous editions we outlined the initiatives, which had been launched in the framework of the Aktau Declaration on Joint Actions signed between the oil and gas operators in 2012 to consolidate individual programs of operators, investors and state authorities into a single initiative for the development of national production. The participants in this initiative – Tengizchevroil LLP, North Caspian Operating Company, KPO and the National company "KazMunayGas" JSC – continued cooperation in 2015 having achieved results in fostering the local content development.

In 2015 the three major oil and gas Operators in the RoK agreed the technical specifications of a single vendor database and succeeded in creation of the Alash database which will become a gate for local suppliers for the needs of all.

KPO was the first company to have subscribed to the Alash database in November 2015 with the intention to use local companies' profiles in its procurement process. With the view of supporting the country's industrial sector, the three Operators have resolved to focus on the TOP 10 specific commodity groups of goods, works and services. Those have been defined as a result of historical data analysis conducted by each Operator and by matching the criterion of long term demand for the life time of Projects' operations economically and commercially suitable for localisation.

On the 6th of October, 2015, the Operators held a joint Forum in Almaty where requirements and technical specifications for the TOP 10 GWS were disclosed with the potential vendors. This one-day high level event became an effective platform for dialogue and discussion of localisation opportunities between various market players and stakeholders, such as RoK government officials, Ministries of Energy and Investment & Development, over 70 Kazakhstani machine building and engineering enterprises, over 30 foreign manufacturers, agencies and financial institutions.

Supplies of energy resources to the West Kazakhstan Oblast

As we reported in the previous Sustainability Report 2014 (p.124), KPO produces and supplies electrical power to the two energy supply organisations "AksaiEnergo" LLC and "Batys Energy Resources" LLP, which in their turn, provide electricity to the ultimate consumers of the Western Kazakhstan region.

Power generation and supply to the Western Kazakhstan region is made by KPO in addition to the power volumes primarily generated to maintain operations in the Karachaganak Field. Operation of the fourth generator at the KPC Gas Turbine Power Plant (GTPP) in the period of 2013-2014 made it possible to supply up to 45-48 MW of electrical power to the regional network. That, in its turn, became a significant contribution to the economy of the region.

In 2015 KPO's potential to supply electrical power to the regional network was reduced, depending on the time of the year, makes up from 20-35% of the total electric power consumption of the WKO. Compared to the previous periods, the volume of provided energy in 2015 was lower due to the engineering constraints resulted from the outage of a step-up transformer at the KPC GTPP Gas Turbine Generator № 3 that was caused by the fire in June 2015. Nevertheless, KPO managed to meet its obligation against the FPSA to supply no less than 20 MW of electrical power to the WKO residents.

With a view to increase power supply reliability and in response to the request of the WKO Administration and West Kazakhstan Distribution Electrical Network Company (DENC), KPO provided finance for the project of upgrading the regional electrical power grid by allocating over KZT 326 mln in 2014. In 2015 the upgrade activities were continued having had amounted to KZT 574 mln.

The upgrade program provided for partial renewal of equipment of the four 110 kV overhead lines (OHL) and four 110 kV substations (SS) en route from KPC GTPP to Poima SS, installation of additional elements on the OHL, as well as replacement of a certain part of outdated equipment and protection devices at SS with new one with better characteristics. The first phase of upgrade process was done in 2014. Implementation of the second phase of upgrade was started in September and fully completed by the end of November 2015.

In 2015, KPO produced 233.94 GWh of electrical power for supply to the WKO network, including 29.62 GWh for AksaiEnergo LLP and 204.32 GWh for Batys Energoresursy LLP. In 2015, the supply of fuel gas for electrical power generation at the KPC GTPP for WKO consumers amounted to 68.05 Mscm.

TABLE №46 **Supply of fuel gas and electrical power by KPO in 2013-2015**

	2013	2014	2015
KPO fuel gas use for WKO supply, mscm including:	98.7	114.3	68.05
• Direct sales to "KazTransGazAimak" (KTGA)	0.0	0.0	0.0
• Use of power generation for WKO	98.7	114.3	68.05
Electricity provided to WKO, GWh	325.9	345.5	233.94

THE WAY WE REPORT

ABOUT THIS REPORT

Report scope and boundaries

KPO Sustainability Report discloses the sustainable development aspects and major achievements in environmental, economic and social areas.

In 2015 KPO remained amongst the first companies in the Republic of Kazakhstan having issued its Sustainability Reports for 2013 and 2014 in accordance with the new Global Reporting Initiative's (GRI) Guidelines 4 (G4).

This Report covers our performance in 2015 and plans for the coming year. In this Report we disclose a three-year comparison to ensure evaluation of our performance over the past three years.

The report is issued annually. The previous Report was issued in July 2015.

In 2015 we strive to improve the quality of the Report, while maintaining transparency and openness.

Global Reporting Initiative

We have been reporting against the GRI Guidelines 4 (G4) since 2013. KPO was amongst the first companies in the Republic of Kazakhstan to apply the new Guidelines 4 of Global Reporting Initiative.

In our Sustainability Report 2015, we continued following the GRI Guidelines 4 maintaining our committed level of transparency in sustainability reporting. This Report has been issued in accordance with the 'Core' Option of the G4.

We keep providing information about our management approach, such as in corporate governance, environmental standards and labour practices.

Our Stakeholders and Material issues

We consider our Sustainability Report as a tool of engagement with our stakeholders. More details are disclosed in the similarly named Chapter on pp. 6-11.

We urge our stakeholders to provide their feedback on our Report 2015.

The Report is also available on our website at www.kpo.kz.

Independent Assurance

KPO involves a third party to obtain assurance of the transparency and credibility of the information presented in the Report.

The process for external assurance implies a limited review of the Report contents by the assurer in compliance with the ISAE 3000 International Standard on Assurance Engagement. Annually KPO holds a site visit by the assurer to demonstrate information drafted in the Report. Prior to issue, the approved Sustainability Report is confirmed by the assurer issuing their Assurance Report to be included in the Sustainability Report.

The limited level independent assurance of the 2015 Sustainability Report against the GRI G4 has been provided by EY. The scope and terms of limited assurance are presented in their Independent Assurance Report on pp. 114-115.

GRI CONTENT INDEX

KPO Sustainability Report 2015 meets the requirements of the 'Core' option of the Global Reporting Initative's (GRI) Guidelines 4. The table below demonstrates the disclosures against the 'Core' option.

GENERAL STANDARD DISCLOSURES			
Material aspect / Indicator	**GRI G4 Indicators description**	**References and comments**	**External Assurance**
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 (p. 4)	✔
G4-2	Description of key impacts, risks, and opportunities	Risk management (p. 19), Letter from General Director (p. 4)	✔
ORGANISATIONAL PROFILE			
G4-3	Name of the organization	Our Commitment to Sustainable Development (p. 3)	✔
G4-4	Primary brands, products, and services	Our Products and Export Routes (p. 13), 2015 Operations (p. 14)	✔
G4-5	Location of the organization's headquarters	Feedback (back cover), Operations Overview (pp. 12-14)	✔
G4-6	Number of countries where the organization operates	Operations Overview (pp. 12-14)	✔
	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 Overview (p. 12)	✔
G4-7	Nature of ownership and legal form	Governance Structure (pp. 17-19)	✔
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	Our Products and Export Routes (pp. 13-14)	✔
G4-9	Scale of the organization, including: Total number of employees	People and Skills (p. 47)	✔
	Total number of Operations and Projects	KPO operating facilities (p. 12), Karachaganak Operating facilities in 2014 (pp. 6-8 of the Sustainability Report 2014)	✔
	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	2015 Operations (p. 14)	✔
G4-10	Total number of employees by employment contract and gender	People and Skills (p. 47)	✔

Material aspect / Indicator	GRI G4 Indicators description	References and comments	External Assurance
ORGANISATIONAL PROFILE			
G4-10	Total number of permanent employees by employment type and gender	People and Skills (p. 47)	✔
	Total workforce by employees and supervised workers and by gender	People and Skills (p. 47)	✔
	Total workforce by region and gender	People and Skills (p. 47)	✔
	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. 53)	✔
G4-12	Description of the organization's supply chain. This Standard Disclosure sets the overall context for understanding an organization's supply chain.	Supply Chain (pp. 95-96)	✔
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	2015 HSE Improvement Plan (pp. 27-29), Asset Integrity management (pp. 33-37), HSE Cards Programme (pp. 30-32)	✔
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	Our strategy in working with local communities (p. 89)	✔
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	Business partnerships and membership in associations (p. 9)	✔
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	✔

Material aspect / Indicator	GRI G4 Indicators description	References and comments	External Assurance
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-18	Process for defining the report content and the Aspect Boundaries	Material Aspects (pp. 6-7)	✔
	Explanation of how the organization has implemented the Reporting Principles for Defining Report Content;	Material Aspects (pp. 6-7)	✔
G4-19	List all the material Aspects identified in the process for defining report content.	Material Aspects (pp. 6-7)	✔
G4-20	For each material Aspect, report the Aspect Boundary within the organization, as follows: Report whether the Aspect is material within the organization	Material Aspects (pp. 6-7), Letter from General Director (pp. 4-5)	✔
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.	Material Aspects (pp. 6-7)	✔
	Description of the geographical location where the Aspect is material for the entities identified	Operations Overview (pp. 12-14)	✔
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 (p. 8)	✔
G4-25	Basis for identification and selection of stakeholders with whom to engage	Stakeholder Engagement (p. 8)	✔
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.	Material Aspects (pp. 6-7), Stakeholder Engagement (p. 8)	✔
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. 8-11); key issues raised by local communities are presented in the chapter 'Community Engagement' (pp. 89-94)	✔
	Report the stakeholder groups that raised each of the key topics and concerns	Stakeholder Engagement (pp. 8-11), Material aspects (pp. 6-7)	✔

Material aspect / Indicator	GRI G4 Indicators description	References and comments	External Assurance
EXECUTIVE SUMMARY			
G4-28	Reporting period (such as fiscal or calendar year) for information provided	Letter from General Director, (pp. 4-5), Report scope and boundaries (p. 101)	✔
G4-29	Date of most recent previous report (if any)	Report scope and boundaries (p. 101)	✔
G4-30	Reporting cycle (such as annual, biennial)	Report scope and boundaries (p. 101)	✔
G4-31	Contact point for questions regarding the report or its contents	Feedback (back cover)	✔
G4-32	Report the 'in accordance' option the organization has chosen	Global Reporting Initiative (p. 101), GRI Content Index (pp. 102-113)	✔
	Report the GRI Content Index for the chosen option	GRI Content Index (pp. 102-113)	✔
	Report the reference to the External Assurance Report, if the report has been externally assured	Assurance Statement (pp. 114-115)	✔
G4-33	Organization's policy and current practice with regard to seeking external assurance for the report.	Independent Assurance (p. 101)	✔
CORPORATE 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	Governance Structure (pp. 17-19)	✔
ETHICS AND COMPLIANCE			
G4-56	Organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.	Ethical Conduct (pp. 21-22)	✔
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.	Ethical Conduct (pp. 21-22), Employee Relations (p. 53)	✔
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 (pp. 21-22), Employee Relations (p. 53)	✔

SPECIFIC STANDARD DISCLOSURES				
DMA and Indicators	**GRI G4 Indicators description**	**References and comments**	**Omissions**	**External Assurance**
ECONOMIC PERFORMANCE				
Economic performance	Disclosures on Management Approach (hereinafter as DMA)	Aspect covers KPO; Supporting Social Infrastructure (pp. 86-88)		✔
G4-EC4	Financial assistance received from government	No assistance received		✔
Market presence	DMA	Aspect covers KPO; Development of National Personnel (pp. 49-52)		✔
G4-EC5	Ratio of standard entry level wage by gender compared to local minimum wage at significant locations of operation	Compensations and Benefits (p. 54); Karachaganak oil & gas condensate field located in the Western Kazakhstan Oblast (Republic of Kazakhstan) relates to 'significant location of operations'.		✔
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	Development of the national personnel (pp. 49-52); By 'senior management' is meant to be 'Executive management and their deputies' given in category 1 in Table № 20 'Implementation of KPO Nationalization plan in 2015 by categories of employees' on page 49. 'Local' in the context refers to national employees, the citizens of the Republic of Kazakhstan.		✔
Indirect economic impacts	DMA			✔
G4-EC7	Development and impact of infrastructure investments and services supported	Social and infrastructure projects implemented by KPO in 2015 (pp. 86-88)		✔
G4-EC8	Significant indirect economic impacts, including the extent of impacts.	Local Content Development (pp. 96-100)		✔
Procurement practices	DMA	Aspect covers KPO; Local Content Development (p.96-97)		✔
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	Local Content Development, graph № 28 on Share of Local Content out of total KPO expenditures, 2013–2015 (p. 97)		✔
Reserves	DMA			✔
G4-OG1 (partially)	Volume and type of estimated proved reserves and production	Operations Overview (p. 12)		✔

DMA and Indicators	GRI G4 Indicators description	References and comments	Omissions	External Assurance
ENVIRONMENTAL PERFORMANCE				
Energy	DMA	Aspect covers KPO; Table № 34. Our targets in energy management (p. 73), Implementation of Energy management system (p. 73), Energy audit (p. 74)		✔
G4-EN3	Energy consumption within the organization	Energy consumption in 2015 (p. 74). KPO applies standards, methods and convensions regulated by the RoK normative documents in energy saving and energy efficiency.		✔
G4-EN5	Energy intensity	Graph № 24 on Dynamics of energy intensity (p. 75)		✔
Water	DMA	Aspect covers KPO; Environmental Protective Measures Plan for 2015 (pp. 59-61)		✔
G4-EN8	Total water withdrawal by source	Table № 36 'KPO's water consumption in 2013-2015 by sources' (p. 76)		✔
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	Table № 37. Reuse of treated wastewater in 2013-2015 (p. 77). Approximately 8% of the water taken from surface sources was reused in 2015.		✔
Biodiversity	DMA	Aspect covers KPO; Environmental Protective Measures Plan for 2015 (pp. 59-61), Biodiversity (pp. 83-85)		✔
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity (pp. 83-85)		✔
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 (p. 61)		✔
G4-EN13 (partially)	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.	The results of the Environmental Protective Measures implementation for 2015 (p. 61)		✔

DMA and Indicators	GRI G4 Indicators description	References and comments	Omissions	External Assurance
ENVIRONMENTAL PERFORMANCE				
G4-EN14	Total number of IUCN red list species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	Table № 41. Species essential for the nature conservation recorded within the KOGCF area (pp. 84-85)		✔
Emissions	DMA	Aspect covers KPO; Environmental Protective Measures Plan for 2015 (pp. 59-61), Air Emissions (pp. 62-63)		✔
G4-EN15	Direct greenhouse gas (GHG) emissions	Direct greenhouse gas emissions (pp. 69-70)		✔
G4-EN16	Indirect greenhouse gas (GHG) emissions	Indirect greenhouse gas emissions (p. 70)		✔
G4-EN18	Specific greenhouse gas (GHG) emissions	Specific greenhouse gas emissions (p. 71)		✔
G4-EN19	Reduction of greenhouse gas (GHG) emissions	GHG emission reduction (p. 72)		✔
G4-EN21	NOx, SOx, and other significant air emissions	Air emissions (pp. 62-63)		✔
Effluents and wastes	DMA	Aspect covers KPO; Environmental Protective Measures Plan for 2015 (pp. 59-61)		✔
G4-EN22	Total water discharge by quality and destination	Discharge of treated wastewater, (pp. 78-79)		✔
G4-EN23	Total weight of waste by type and disposal method	Waste disposal (pp. 81-82)		✔
G4-EN24	Total number and volume of significant spills	In 2015 no cases of significant spills were recorded in the territory of the Karachaganak field. The definition of a "significant spill" is provided in the Glossary.		✔
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.		✔
G4-OG6	Volume of flared and vented hydrocarbon	Gas Flaring (p. 64)		✔

DMA and Indicators	GRI G4 Indicators description	References and comments	Omissions	External Assurance
ENVIRONMENTAL PERFORMANCE				
G4-OG7	Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal	Table № 40 'Waste produced from well operations in 2015 by waste handling method' (p. 82)		✔
Compliance	DMA	Aspect covers KPO;		✔
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations	Environmental fines (p. 61); There were no cases of non-monetary sanctions applied to the Company.		✔
Overall	DMA	Aspect covers KPO; Environmental Protective Measures Plan for 2015 (pp. 59-61), Environmental Management System (p. 58)		✔
G4-EN31	Total environmental protection expenditures and investments by type	Table № 24 'Expenses for implementation of the 2015 EPMP, KZT' (p. 60)		✔
Environmental grievance mechanisms	DMA	Aspect covers KPO; Dealing with Grievance and Suggestions (pp. 91-93)		✔
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	Dealing with grievance and suggestions (pp. 91-92)		✔
LABOUR PRACTICES AND DECENT WORK				
Employment	DMA	Aspect covers KPO; Employee Relations (p. 53)		✔
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	People and Skills (p. 48)		✔
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 (p. 54)		✔
Labor / Management relations	DMA	Aspect covers KPO; Employee Relations (p. 53)		✔
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	Employee Relations (p.53)		✔

DMA and Indicators	GRI G4 Indicators description	References and comments	Omissions	External Assurance
LABOUR PRACTICES AND DECENT WORK				
Occupational Health and Safety	DMA	Aspect covers KPO and its contractors; Management systems (p. 19), 2015 HSE Improvement Plan (pp. 27-29), HSE Improvement Plan 2016 (p. 30)		✔
G4-LA6 (partially)	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 (pp. 25-27), Protection of health (pp. 38-43)		✔
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation.	Management of ill health in the workforce (p. 40)		✔
G4-LA8 (partially)	Health and safety topics covered in formal agreements with trade unions	Sustainability Report 2014, Employee Relations (p. 103)		✔
Training and Education	DMA	Aspect covers KPO; Training and Development (pp. 51-52), Compensations and Benefits (p. 54), KPO partnership with Kazakhstani Universities, Scholarship programmes for national employees and their children (p. 55)		✔
G4-LA9	Average hours of training per year per employee by gender and by employee category	Training and Development (pp. 51-52). Data is not provided by gender as it is not considered viable since the personnel training plan is developed regardless of gender.		✔
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Scholarship programmes for national employees and their children (p. 55)		✔
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	Compensations and Benefits (p. 54)		✔
Diversity and Equal Opportunity	DMA	Aspect covers KPO; Development of National Personnel (pp. 49-50)		✔

DMA and Indicators	GRI G4 Indicators description	References and comments	Omissions	External Assurance
LABOUR PRACTICES AND DECENT WORK				
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 National Personnel (pp. 49-50)		✔
Diversity and Equal Remuneration	DMA	Aspect covers KPO; Code of Conduct (p. 21), Employee Relations (p. 53)		✔
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.		✔
Labor Practices Grievance Mechanisms	DMA	Aspect covers KPO; Ethical Conduct (p. 21), Employee relations (p. 53)		✔
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	Employee Relations (p. 53)		✔
HUMAN RIGHTS				
Investment	DMA	Aspect covers KPO; Code of conduct and anti-corruption awareness and training (pp. 21-22)		✔
G4-HR2 (partially)	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 and anti-corruption awareness and training (pp. 21-22)		✔
Freedom of Association and Collective bargaining	DMA	Aspect covers KPO; Employee Relations (p. 53)		✔
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. 53)		✔

DMA and Indicators	GRI G4 Indicators description	References and comments	Omissions	External Assurance
HUMAN RIGHTS				
Security Practices	DMA	Aspect covers KPO; Security (pp. 44-45)		✔
G4-HR 7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	Security, (pp. 44-45)		✔
Human Rights Grievance Mechanisms	DMA	Aspect covers KPO; Hotline and other compliance measures (pp. 21-22), Employee Relations (p. 53)		✔
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	Employee Relations (p. 53)		✔
SOCIAL PERFORMANCE				
Local Communities	DMA	Aspect covers KPO; Community engagement (pp. 89-94)		✔
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	KPO Community Engagement department implements programs of engagement with local communities; Community engagement (p. 94)		✔
Anti-corruption	DMA	Aspect covers KPO and its contractors; Code of conduct; Anti-corruption corruption awareness and training (pp. 21-22)		✔
G4-SO4	Communication and training on anti-corruption policies and procedures	Code of Conduct; Anti-corruption awareness and training (pp. 21-22)		✔
Public Policy	DMA	Aspect covers KPO; Our strategy in working with local communities (p. 89)		✔
G4-SO6	Total value of political contributions by country and recipient/beneficiary	No contributions		✔
Grievance Mechanisms for Impacts on Society	DMA	Aspect covers KPO; Dealing with grievance and suggestions (pp. 91-93)		✔
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	Dealing with grievance and suggestions (pp. 91-93)		✔

DMA and Indicators	GRI G4 Indicators description	References and comments	Omissions	External Assurance
SOCIAL PERFORMANCE				
Emergency preparedness	DMA: mechanisms used to involve local communities in the development of emergency plans, response to an incident, trainings.	Aspect covers KPO; Safety: Emergency management (p. 32); Item IV of 2015 HSE Improvement Plan 'Asset Integrity & Risk Management' (pp. 28-29); Community engagement: Community preparedness (pp. 93-94)		✔
Asset Integrity and Process Safety	DMA: Asset integrity and process safety procedures, investigation results of potential incidents.	Aspect covers KPO; Safety: Item IV of 2015 HSE Improvement Plan 'Asset Integrity & Risk Management' (pp. 28-29), Asset Integrity Management (pp. 33-37)		✔
G4-OG13	Number of process safety events, by business activity (The integrity of oil and gas company assets and the prevention of process safety events such as spills, fires and gas releases are of the utmost importance)	Asset Integrity Management (pp. 36-37)		✔
	Report procedures for assuring asset integrity as an essential element of safe operations. Report on the application of nationally and internationally accepted asset integrity and process safety disciplines. The emphasis of asset integrity and process safety is to prevent unplanned releases that could result in a major incident. Report processes for identifying, reporting, management review and follow-up on investigation results of near-accidents; these are also referred to as near misses or potential accidents.	Asset Integrity Management (pp. 33-37)		✔

Building a better working world

Independent Assurance Report on the Karachaganak Sustainability Report 2015 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 2015' (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 "About this Report" on page 101 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 2015,
- 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

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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 2015,
- 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,
- Visit to KPO's main office to conduct interviews,
- 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 2015 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
17.06.2016

GLOSSARY

	ABBREVIATION	DESCRIPTION
A	ACET	Asset Condition Evaluation Tool
	AIMF	Asset Integrity Management Framework
	AI	Asset Integrity
B	BAT	Best available techniques
	BOE	Barrels of oil equivalent
C	CMC	Contractor's Marketing Committee
	CMMS	Computerised Maintenance Management System
	CMT	Crisis Management Team
	ConCom	Contractor's Committee
	CPC	Caspian Pipeline Consortium
D	DSIU	Declaration of Safety for Industrial Units
E	EACS	Electronic Access Control System
	EITI	Extractive Industry Transparency Initiative
	EMS	Environmental Monitoring Station
	EOPS	Early Oil Production Satellite
	EPMP	Environmental Protection Measures Plan
	ER	Emergency Response
F	FAB	Field Administration Building
	FEED	Front End Engineering Design
	FPSA	Final Production Sharing Agreement
	FSL	Fertile Soil Layer
G	Gcal	Gigacalorie
	GHG	Greenhouse Gases
	GRI	Global Reporting Initiative
	GTPP	Gas Turbine Power Plant
	GWS	Goods, works and services
H	HRA	Health Risk Assessment
	HSE	Health, Safety and Environment

	ABBREVIATION	DESCRIPTION
I	IEC	Industrial Environmental control
	IFC PS5	Performance Standard 5 of the International Finance Corporation
	IMT	Incident Management Team
	IOGP	International Oil and Gas Producers' Association that collects safety incident data from its member companies globally since 1985.
	ISO 14001	Internationally accepted standard that sets out requirements for putting in place an effective Environmental Management System
J	JMC	Joint Marketing Committee
	JOC	Joint Operating Committee
	JV	Joint Venture
K	KEP	Karachaganak Expansion Project
	KGDBN	Karachaganak Gas Debottlenecking Project
	kt	kiloton
	KPA	Kazakhstan Petroleum Association
	KPC	Karachaganak Processing Complex
	KPI	Key Performance Indicators
	Kscm	Thousand standard cubic meters
L	LOPC	Loss of primary containment
	LTIF	Lost Time Injury Frequency
M	MAH	Major Accident Hazards
	MOC	Management of Change
	MPC	Maximum Permissible Concentration
	MPC one time	Maximum permissible one-time concentration of chemical substance [mg/m^3] in the ambient air of settlements. This concentration should not cause a reflex response in human bodies (delay of a breath, irritation of the eyes, upper respiratory tract and other) in case of 20-30 minutes of inhalation.
	MPC daily average	Maximum permissible daily average concentration of chemical substance [mg/m^3] in the ambient air of settlements. This concentration should not have direct or indirect adverse effect on human body in case of inhalation during indefinitely long-term period (years).
	MCL	Maximum Permissible limits
	Mscm	Mln standard cubic metres
	MWH	Megawatt hour

	ABBREVIATION	DESCRIPTION
N	NCP	National Contact Point
	NGO	Non-governmental organisation
O	OHSAS 18001	Internationally recognised assessment specification for occupational health and safety management systems
	OpCom	Operators Committee
	OECD	The Organisation for Economic Co-operation and Development
	OPS	Oil Pumping Station
P	Parent Companies	BG, eni, Lukoil, Chevron and KazMunayGaz National Company
	PCA	Parent Companies Audit
	POB	Personnel on Board Control System
	PDR	Performance and Development Review
Q	QRA	Quantitative Risk Assessment
R	RBI	Risk based approach
	RoK	Republic of Kazakhstan
	RTIF	Road Traffic Incident Frequency
S	SCE	Safety Critical Element
	Significant spill	As per the KPO Incident classification, the definition of a 'significant spill' is applicable to an incident, which has caused contamination of the environment through hydrocarbon/chemical spills to land or water with the volume of spilled hydrocarbon/chemical exceeding 1,000 litres.
	SMS	Security Management System
	SPZ	Sanitary Protection Zone
	SR	Sustainability Report
T	TRIF	Total Recordable Injury Frequency
U	UK	United Kingdom
V	VAF	Value Assurance Framework
	VAR	Value Assurance Review
	VPSHR	Voluntary Principles on Security and Human Rights
W	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 wish to contribute to the Sustainability Report 2016, please email us at

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KPO Sustainability

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