



KPO CHEMICAL TECHNICAL WEBINAR

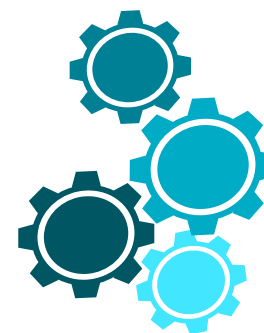
Карачаганак Петролиум Оперейтинг Б.В.

24/06/2024

DISCLAIMER

The information on these slides is provided for informational purposes only. It represents a preliminary description of KPO's requirements in accordance with current plans, but KPO reserves the right to modify this information during project planning and implementation. KPO is not liable for any loss, damage, or expense arising from the use of this information. This information will not be included in any contract between KPO and the contractors participating in the seminar.

Today's discussion is one of many activities KPO and its stakeholders undertake to develop local content.



Review of chemical products in manufacturing activities

СОДЕРЖАНИЕ

1. KARACHAGANAK FIELD OVERVIEW
2. PRODACTION CHEMISTRY
3. REQUIREMENTS OF THE REPUBLIC OF KAZAKHSTAN AND KPO TO CHEMICALS



1. GENERAL INFORMATION ABOUT THE KARACHAGANAK FIELD



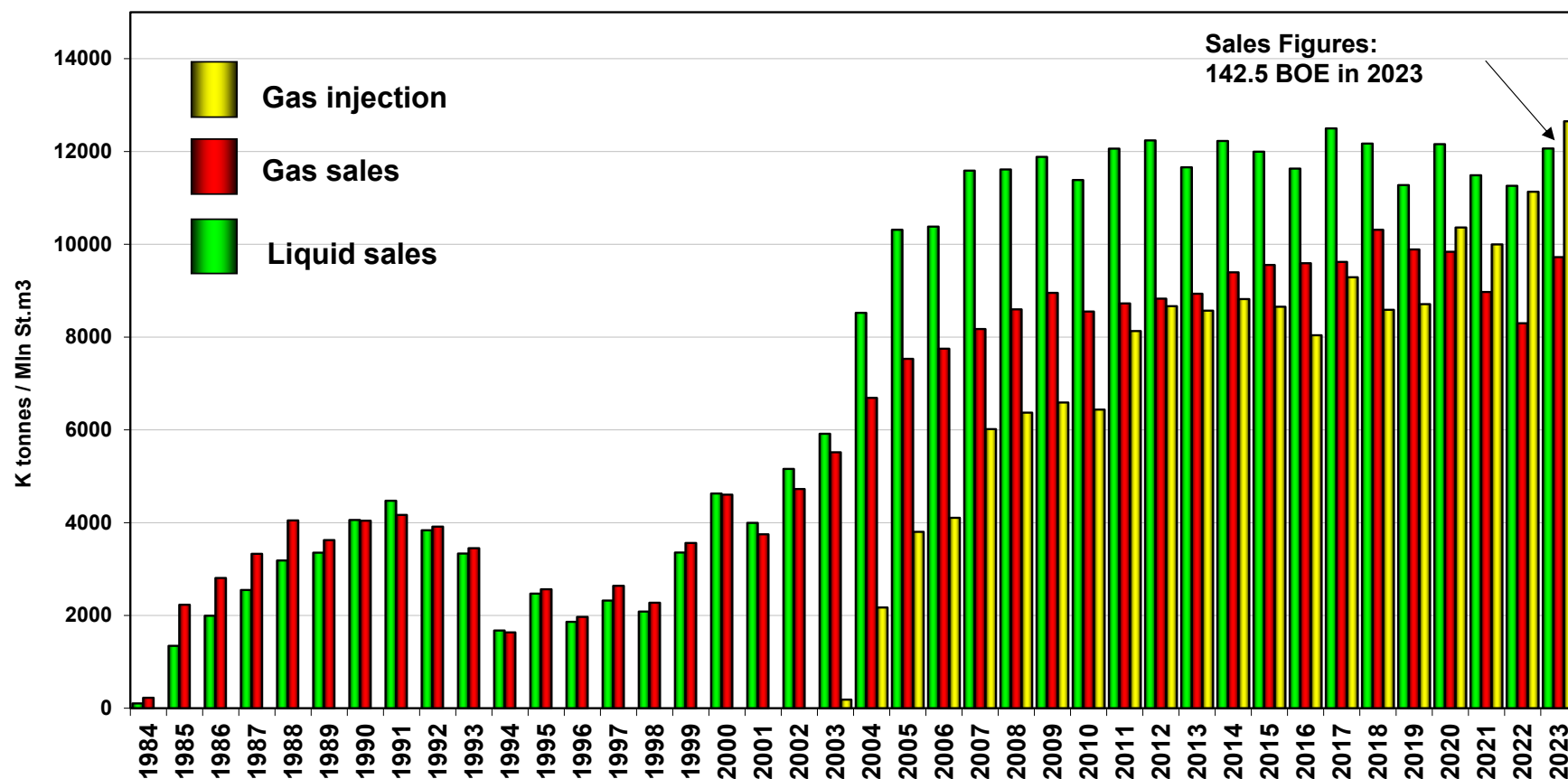
- ❑ One of the largest fields of oil and gas condensate in the world
- ❑ Discovered in 1979;
- ❑ Gross Reserves:
 - over 1.2 billion ton of oil and condensate and 1.35 tcm of gas.



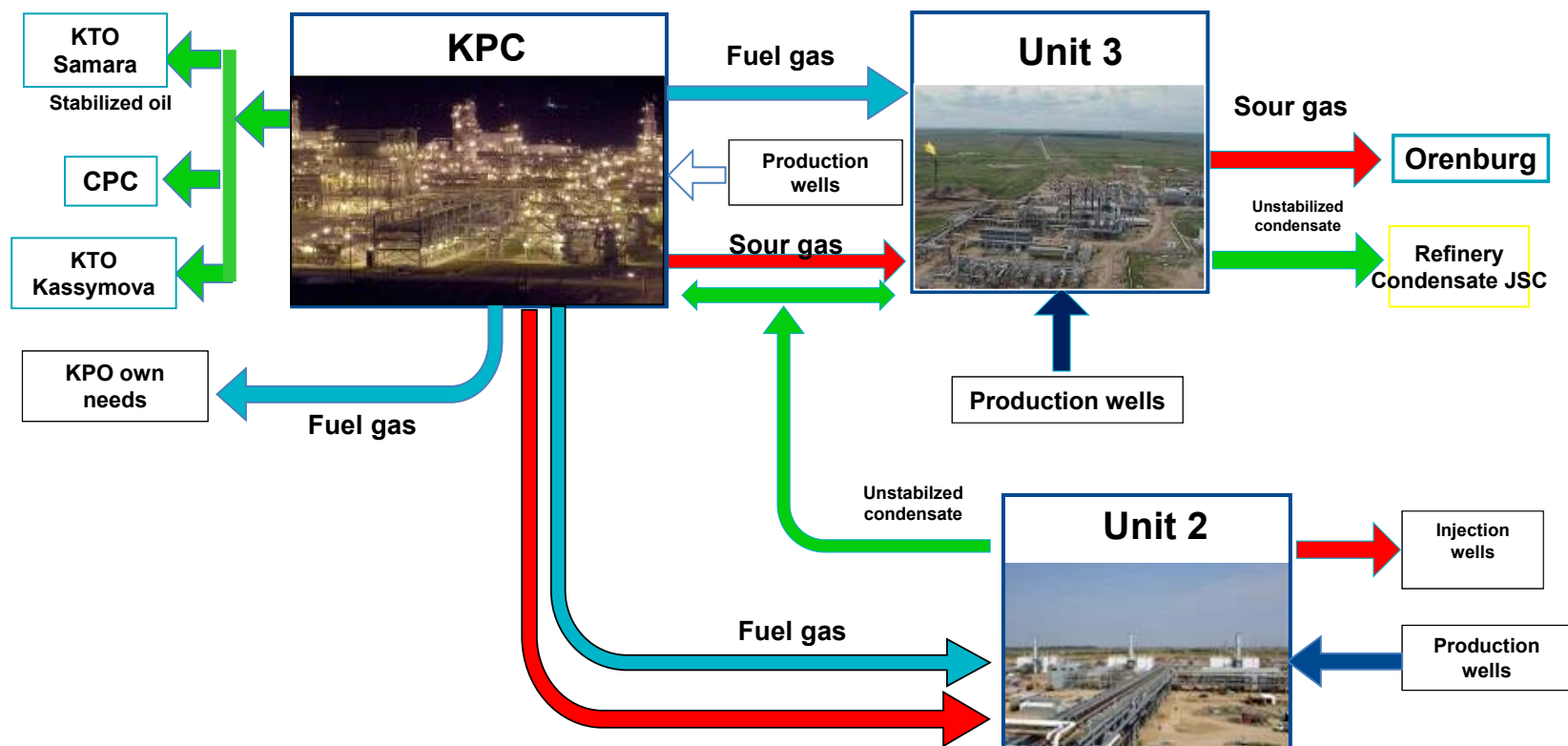
1. DEVELOPMENT OF THE KARACHAGANAK FIEL - MAIN STAGES

- 1984 - Production commenced.
- 1992 - Kazakhstan Government starts negotiating a Production Sharing Agreement (PSA) with BG Group and ENi.
- 1995 - Production Sharing Principles Agreement signed.
- 1997 - Chevron and LUKOIL join the international consortium and a 40 year Final Production Sharing Agreement (FPSA) is signed in November.
- 1998 - FPSA becomes effective.
- 1999 - Construction work commences.
- 2003 - The President of Kazakhstan inaugurates “First Oil” of Phase II.
- 2004 - First shipment of crude oil from Novorossiysk sea terminal via CPC.
- 2007 - GSA contract was agreed between KPO & KRG (OGP Complex).
- 2011 - Launch of the 4th condensate stabilization process line at the KPC
- 2012- NC “KazMunayGas” officially joins the Karachaganak joint venture as the 5th partner.
- 2016 - 139.67 MMBOE Production Record in a Total Shut Down year.
- 2018 - 147.5 MMBOE Production Record.
- 2020 - Annual Crude Oil Processing record at KPC is 10,917.560 Kt
- 2023 - Annual Max Gas Re-injection record in 2023 is 12,650.071 Mscm
Annual Max Raw Gas Production record in 2023 is 22,385.539 Mscm

1. SALES OF LIQUID HYDROCARBONS AND GAS AT THE KARACHAGANAK FIELD FROM 1984 TO 2023



1. TECHNOLOGICAL FACILITIES OF KARACHAGANAK



THE CURRENT STRUCTURE OF SUPPLY OF CHEMICALS AND REAGENTS

Chemical application is an integral part of the process ensuring asset integrity and flow assurance. Chemicals are applied field wide throughout all production plants from the wells to the export pipelines. Currently applied to all critical systems including condensate stabilisation, fuel gas production, gas dehydrations, crude desalting, process water, boiler and utility systems.

Initially from 2008 the Supply of all chemicals, speciality and commodity, was carried out by one supplier. Later, in an effort to contribute to region development and increased local content share, provision of commodity chemicals was assigned to local companies:

- Provision of Specialty Chemicals is by RauanNTechx
- Provision of Commodity Chemicals is by Chem-Invest and Petro-Unit



KPO PRODUCTION DEPARTMENT NEEDS FOR LOCALLY PRODUCED CHEMICAL PRODUCTS

DESCRIPTION	ANNUAL VOLUME, AVERAGE
Antifoulant	348 tonnes
Demulsifier	224 tonnes
Scale inhibitor	216 tonnes
H2S Scavenger	7 tonnes
Drag Reducing Agent (DRA)	177 tonnes
Solvent (removes paraffin and asphaltene deposits)	85 tonnes
Sulfuric Acid 93%	1,064 tonnes
Caustic Soda Solution 14%	5,118 tonnes
DEG	185 tonnes
TEG	841 tonnes
Methanol	9,200 tonnes

2. APPLICATION SCOPE OF CHEMICALS

Antifoulant

- Antifoulant is designed to prevent fouling/plugging in the Oil/Oil Heat Exchangers, scale deposition in KPC Reboilers (Condensate Stabiliser) and Splitters.
- Active components disperse organic heavy substances (in particular paraffins) and inorganic substances in the oil, preventing their precipitation/build-up in the overheat sections of the heat exchangers.
- Temperature 180 °C, pressure 8 bar.
- Injection points are on all four KPC trains and upstream of Stabiliser.

Demulsifier

- Demulsifier is designed to break emulsions, such as water in oil, i.e. emulsions where oil is a dispersion medium.
- By reducing surface tension at the phase boundary, it increases the rate at which the emulsion breaks down into water in oil.
- Enhanced water separation from oil improves operation performance of Unit 2 and KPC three-phase separators and performance of KPC desalter unit, reducing salt carry over to oil stabilization and separation systems.
- Working temperature 30°C, pressure 25 – 78 bar.

Scale Inhibitor

- Scale Inhibitor is designed to prevent formation of carbonate scale in KPC and Unit 2 Water Treatment Facilities with reinjection into the reservoir.
- Temperature 10-30°C, pressure 2-5 bar.

2. APPLICATION SCOPE OF CHEMICALS

H₂S Scavenger

- Sand filtration is designed to remove suspended particles of size up to 20 microns in process water. Backwash water taken from the sand filters after the wash is directed to the clarified water tank.
- H₂S scavenger is a technical product injected to the clarified water tank and facilitates removal of residual H₂S and iron sulphide in the clarified water collected from the sand filters of process water backwash system.
- Clarified water tank has the following characteristics:
 - - Design pressure: 0,1 barg
 - - Design temperature: -30 + 80 °C

Drag Reducing Agent (DRA)

- Application of Drag Reducing Agent is one of the efficient techniques of increasing the volume of liquid flow in a pipeline without modifying the pipeline design. Designed to reduce the wall vibrations and friction whilst the liquid flows in the pipeline. DRA reduces a resistance in the pipeline by transforming the liquid flow from turbulent to the laminar one, thus reducing a differential pressure at the beginning and at the end of the pipeline, it allows to reduce the pumps work load and increase liquid flow rate.
- DRA has been used in the Oil Export Pipeline.

Paraffin and Asphaltene Solvent

- Designed to remove paraffin and asphaltene build-up in the wells, pipelines, pumps and other equipment used in the oil industry, which may result in decline of well production, equipment performance and flow assurance. Chemical must be compatible with carbon steel.

2. APPLICATION SCOPE OF CHEMICALS

Sulfuric acid 93%

- Sulfuric acid is used to neutralize spent caustic soda.
- GOST 2184

Caustic Soda Solution 14%

- Removes H₂S (primary treatment) and mercaptans in gasoline sweetening unit, converting mercaptans into disulfides.
- GOST 2263

DEG

- DEG has been used as a heating medium for buildings and heaters in Unit 3 processes.
- In addition, as a 50% solution with water, it has been used to build a back pressure to open safely subsurface safety valves.
- Class B under GOST 10136

TEG

- TEG has been used as an absorber for gas dehydration.
- Class A under TU 2422-055-52470175-2014

Methanol

- Methanol has been used in Unit 3 as an inhibitor to prevent hydrate development in the gas pipelines. Hydrates are crystalline compounds of water and gas such as methane, ethylene, propane, etc., which are developed under certain conditions of pressure and temperature. These deposits may result in pipeline plugging and cause serious problems to operations of gas pipelines.
- GOST 2222



3. REQUIREMENTS OF THE REPUBLIC OF KAZAKHSTAN AND KPO TO CHEMICALS

- ST KZ Certificate;
- Compliance with KPO Specifications;
- Material Safety Data Sheet;
- RoK Laws and Regulations Compliance;
- Compliance with EEU Technical Regulation “On Safety of Chemical Products”;
- Competitive price



Overview of chemical products in well operations at KPO

DRILLING OPERATIONS OVERVIEW / ОБЩИЙ ОБЗОР ОПЕРАЦИЙ ПО БУРЕНИЮ

The Well Operations department performs drilling at the Karachaganak field using two drilling rigs provided by the JV of KMG-PARKER Business Partners.

New development wells are being drilled by a two-rig fleet, with each rig drilling 3-4 wells per year, for a total of up to eight wells drilled each year.

Workover activities are carried out from time to time by a workover rig, which repairs or replaces wellheads and/or deepens existing wells.

Drilling Rig 249: Completed drilling of new well 9883 and is currently running completion operations.
Drilling Rig 258: Completed drilling of well 9884 and is currently running completion operations.



Отдел скважинных операций выполняет бурение на месторождении Карачаганак с использованием двух буровых установок, посредством подрядной компании совместного предприятия ТОО «КМГ-ПАРКЕР».

Новые эксплуатационные скважины бурятся с помощью двух буровых установок, каждая из которых бурит 3-4 скважины в год, всего до восьми скважин в год.

Работы по капитальному ремонту выполняются время от времени с помощью , буровой установки, которая ремонтирует или заменяет устья скважин и/или углубляет существующие скважины.

Буровая установка 249: Завершено бурение новой скважины 9883, в настоящее время выполняются операции по завершению.

Буровая установка 258: Завершено бурение скважины 9884, в настоящее время выполняются операции по завершению.

WELL SERVICES OVERVIEW / ОБЩИЙ ОБЗОР ПРИ ПОДЗЕМНОМ РЕМОНТЕ СКВАЖИН

QHSE-AKBARYS LLP – provides services on H₂S neutralization during well services activities / TOO

«QHSE-AKBARYS» – предоставляет услуги по нейтрализации H₂S во время выполнения работ на скважинах.

SLS Oil JV LLP provides coil-tubing service and chemicals supply for acid treatment of wells

TOO «SLS Oil JV» предоставляет услуги по использованию колтюбинга и поставке химических реагентов для кислотной обработки скважин.

Aksai Operating LLP provides stimulation service and chemicals supply for acid treatment of wells (acid treatment, acid Frac)

TOO «Аксай Оперейтинг» предоставляет услуги по стимуляции и поставке химических реагентов для кислотной обработки скважин (кислотная обработка, кислотный ГРП).



WELL OPERATIONS / СКВАЖИННЫЕ ОПЕРАЦИИ

Drilling Muds used for drilling, completion and work over operations are prepared at Liquid Mud Plant.

During the drilling of the 26" hole, water-based mud (WBM) is used.

During the drilling of the 16" hole until the pay zone, oil-based mud (OBM) is used.

The OBM base is SARALINE.

This mud is stored for re-use at the liquid mud plant.

During the completion of wells, Sodium Chloride Brine is used.

Fluids for stimulation: HCL mixtures, Viscosifiers /emulsified acids, organic solvents. Corrosion inhibitors and H₂S scavengers



Буровые растворы, используемые для бурения, завершения и ремонтных работ, готовятся на заводе по приготовлению буровых растворов.

Во время бурения скважины диаметром 26" используется буровой раствор на водной основе.

При бурении скважины интервала диаметром от 16" до продуктивного пласта используется буровой раствор на углеводородной основе.

Основа бурового раствора на углеводородной основе является САРАЛАЙН.

Этот раствор хранится для повторного использования на заводе по производству жидкого бурового раствора.

При закачивании скважины используется рассол хлорида натрия.

Растворы для проведения работ по интенсификации притока скважин используются смеси соляной кислоты, высоковязкие / эмульгированные кислоты, органический растворитель, Ингибиторы коррозии и поглотители сероводорода.

LOCAL CHEMICALS USAGE/ МЕСТНЫЕ ИСПОЛЬЗУЕМЫЕ ХИМИКАТЫ

The current fluids business partner is NDFK, with 98% local involvement.

See the table below for the chemicals used by NDFK, which are produced in Kazakhstan.

Текущий бизнес-партнер по жидкостям — НДФК, с 98% местным участием.
См. таблицу ниже для химикатов, используемых НДФК, которые производятся в Казахстане

Local Chemical used in 2023 -2024 / Местные химические вещества, использованные в 2023-2024 гг.

Name of product / Название продукта	Description/Описание	Usage / Использование, МТ	Supplier / Поставщик
AVACARB /CaCO ₃ , BB	Weighted material, LCM / Утяжеляющий материал, материал для борьбы с потерей циркуляции	403	ТОО "Каратау ПРО", ТОО "Алина Групп" / LLP "Karatau PRO", LLP "Alina Group"
Barite / Барит, BB	Weighted material / Утяжеляющий материал	7,402	ТОО "Каражал Оперейтинг" / LLP "Karazhal Operating"
Sodium Chloride / Хлорид натрия, м ³	Brine 1.19 sg / Рассол	9309.4	ТОО "АГС-Соль Добыча" / LLP "AGS-SOL D OBYCHA"

LOCAL CHEMICALS USAGE/ МЕСТНЫЕ ИСПОЛЬЗУЕМЫЕ ХИМИКАТЫ

The current cementing business partner is Baker Hughes, with 100% local involvement. We are also considering using locally sourced class G cement in our future cementing operations. See the table below for the chemicals used by Baker Hughes, which are produced in Kazakhstan.

Текущим бизнес-партнером по цементированию является Baker Hughes с 100% местным участием. Также, мы рассматриваем возможность использования местного цемента класса G в наших будущих операциях по цементированию. См. таблицу ниже для получения информации о химических веществах, используемых Baker Hughes, которые производятся в Казахстане.

Local Chemicals used in 2023 -2024 / Местные химические вещества, использованные в 2023-2024 гг.

Name of product / Название продукта	Description / Описание	Usage / Использованные, МТ	Supplier / Поставщик
A-2	Gelation Control / Контроль геляции	20.1	"TOPAN" LLP Kazakhstan ТОО «ТОПАН» Казахстан
A-7	Accelerator / Ускоритель	10.1	
Sugar	Retarder / Замедлитель	8.66	
GW-22	Gelling Agent / Загуститель	1.52	
R-2	Retarder / Замедлитель	1.76	

Additionally, we are committed to ensuring that all materials meet the highest industry standards to guarantee the quality and safety of our operations. Collaboration with local suppliers not only enhances our operational efficiency but also supports the local economy and aligns with our sustainability goals.

Кроме того, мы стремимся к тому, чтобы все материалы соответствовали высочайшим отраслевым стандартам, что гарантирует качество и безопасность наших операций. Сотрудничество с местными поставщиками не только повышает нашу операционную эффективность, но и поддерживает местную экономику и соответствует нашим целям устойчивого развития.

LOCAL CHEMICALS USAGE/ МЕСТНЫЕ ИСПОЛЬЗУЕМЫЕ ХИМИКАТЫ

The current Well Service business partners is SLS Oil JV LLP and Aksai Operating LLP;
See the table below for the chemicals used by SLS Oil JV LLP and AO LLP, which are produced in Kazakhstan.

Текущий бизнес-партнеры по скважинным операциям SLS Oil JV LLP и Аксай Оперейтинг. См. таблицу ниже для химикатов, используемых SLS Oil JV LLP и Аксай Оперейтинг, производимые в Казахстане.

Products / Продукты	Consumption in 2023 / Потребление в 2023 г.	Consumption in 2024 / Потребление в 2024 г.
B628, H2S Corrosion Inhibitor / Ингибитор коррозии H2S	18.5 m3	64.4 m3
U066, Mutual Solvent / растворитель	21 m3	50 m3
B694, Corrosion Inhibitor / Ингибитор коррозии	1.3 m3	4.5 m3
Y001, Intensifier / Интенсификатор	1.2 MT	1.76 MT
J716, Organic Solvent / Органический растворитель		23 m3
H33, Hydrochloric Acid 33% / Соляная кислота 33%	105.4 m3	390.9 m3
Nitrogen / Азот	200 m3	950 m3
33% HCL / Соляная кислота 33%	1381 MT	670 MT

KPO does not purchase nor deal with producers of the chemicals for Well Operations but exclusively through the service provider who has its own suppliers / vendors.

КПО не покупает и не работает с производителями химических веществ для операций на скважинах напрямую, а исключительно через поставщика услуг, у которого есть свои собственные поставщики.

IMPORTED CHEMICALS FOR LOCALIZATION/ ИМПОРТИРУЕМЫЕ ХИМИЧЕСКИЕ ВЕЩЕСТВА ДЛЯ ЛОКАЛИЗАЦИИ

KPO is interested in localization of the following chemicals / КПО заинтересована в локализации следующих химических веществ:

Drilling Fluids / Буровые Растворы			Cement slurry / Цементные растворы		
#	General Name / Общее название	Average annual demand, MT / Среднегодовой спрос, МТ	#	General Name / Общее название	Average annual demand, MT / Среднегодовой спрос, МТ
1	Base Oil / Базовое масло	3500	1	Dispersants / Диспергатор	6.8
2	Calcium Chloride (CaCl ₂) / Хлорид кальция	350	2	Mutual Solvent / Растворитель	1.15
3	Fluids loss control agents / Агенты контроля потерь жидкостей	25	3	Foam Preventer / Пеногаситель	1
4	Lime / Известь	300	4	Expansion Control / Расширитель	10
5	LCM (various) /материал для борьбы с потерей циркуляции (различные)	50	5	Anti-settling Agent / Контроль осадки	0.5
6	Shale Inhibitor / Ингибитор сланцев	50	6	Spacer Surfactant / Буфер-ПАВ	1.15
7	Sodium Chloride Salt (NaCl) / Хлорид натрия	50	7	Bonding Agent / Газоблокатор	2.5
8	Viscosifiers / загустители	25	8	Fluids Loss Control / Агент по водоотдаче	3.2
9	Wetting agents / Смачиватели	25	9	FL & Rheology Control / контроль реологии	10

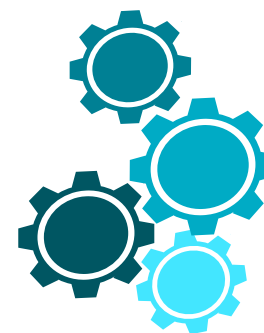
Note: the average annual volumes may vary depending on the scope of work and number of rigs.
Should forum participants be interested in development/localization of chemicals production in the territory of the Republic of Kazakhstan, we are open for further discussion

Примечание: среднегодовые объемы могут варьироваться в зависимости от объема работ и количества буровых установок. Если участники форума заинтересованы в развитии/локализации производства химических веществ на территории Республики Казахстан, мы открыты для дальнейшего обсуждения.

HSE STANDARDS/ СТАНДАРТЫ ОТ, ТБ И ООС

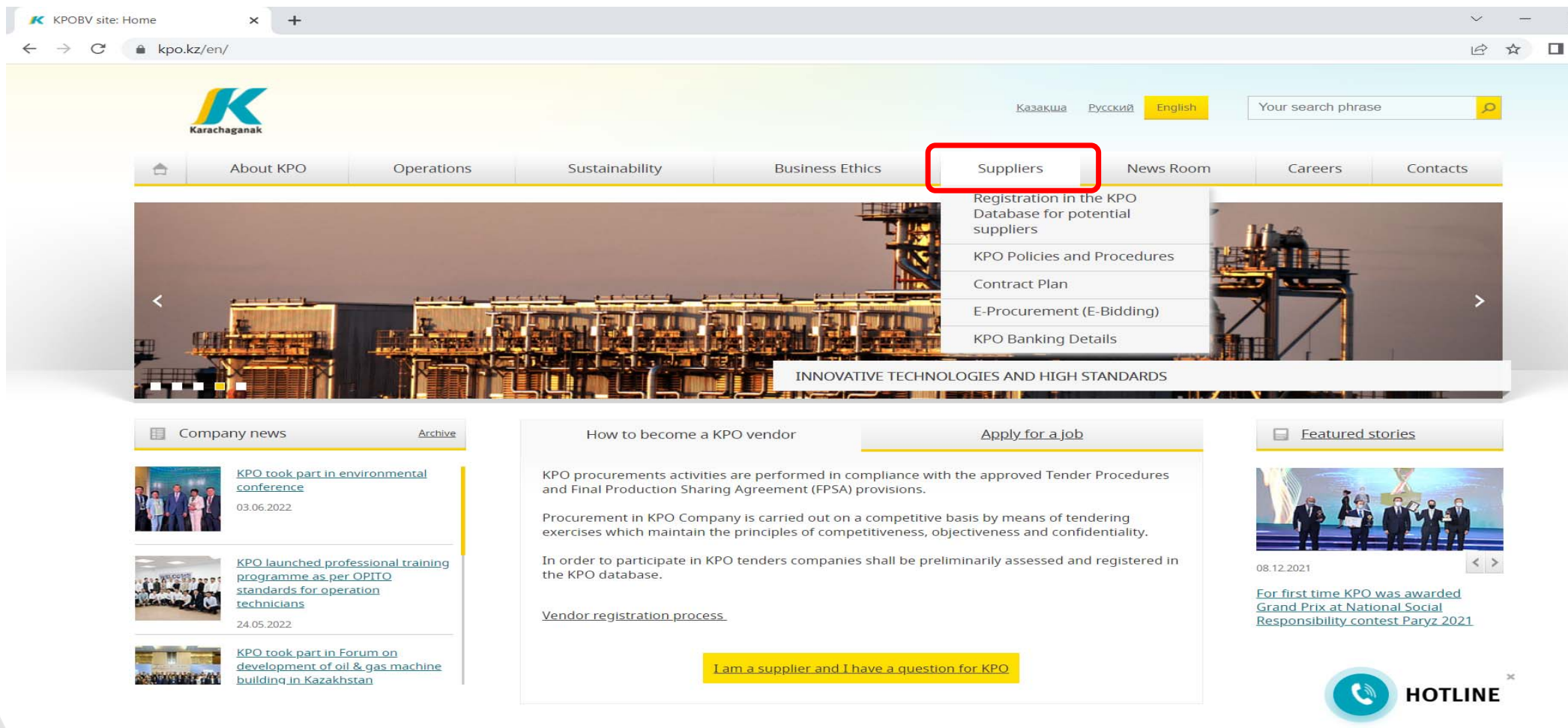
And in conclusion of the presentation, I would like to add that compliance with HSE standards at the facility is a key factor in achieving maximum efficiency in production. In this regard, I wish all attendees dynamic development and safe work. And for Kazakhstan chemical product manufacturers, I wish to achieve recognition not only in the domestic market of our country but also to be in demand at the international level.

В заключение презентации, я хотела бы добавить, что соблюдение стандартов охраны труда, техники безопасности и экологии (HSE) на объекте является ключевым фактором для достижения максимальной эффективности в производстве. В связи с этим, я желаю всем присутствующим динамичного развития и безопасной работы. А для производителей химической продукции Казахстана я желаю добиться признания не только на внутреннем рынке нашей страны, но и быть востребованными на международном уровне.



**KPO Supplier
Database**

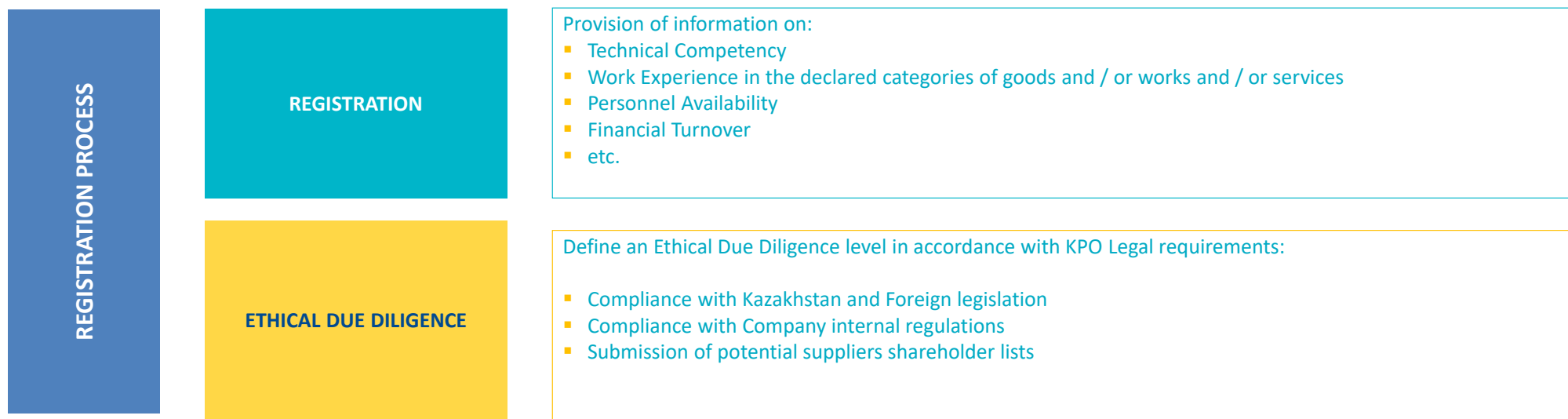
KPO SUPPLIERS DATABASE



The screenshot displays the KPO website interface. At the top, there is a navigation bar with the KPO logo and language options (Kazakh, Russian, English). A search bar is also present. Below the navigation bar, a horizontal menu contains links to 'About KPO', 'Operations', 'Sustainability', 'Business Ethics', 'Suppliers', 'News Room', 'Careers', and 'Contacts'. The 'Suppliers' link is highlighted with a red box, and a dropdown menu is visible, listing options: 'Registration in the KPO Database for potential suppliers', 'KPO Policies and Procedures', 'Contract Plan', 'E-Procurement (E-Bidding)', and 'KPO Banking Details'. Below the navigation bar, a large banner image shows an industrial facility with the text 'INNOVATIVE TECHNOLOGIES AND HIGH STANDARDS'. The main content area is divided into three columns. The left column, titled 'Company news', lists three recent news items with dates: 'KPO took part in environmental conference' (03.06.2022), 'KPO launched professional training programme as per OPITO standards for operation technicians' (24.05.2022), and 'KPO took part in Forum on development of oil & gas machine building in Kazakhstan'. The middle column, titled 'How to become a KPO vendor', provides information about the procurement process and includes a link to the 'Vendor registration process'. A yellow button at the bottom of this column reads 'I am a supplier and I have a question for KPO'. The right column, titled 'Featured stories', shows a photo of a group of people and a link to 'For first time KPO was awarded Grand Prix at National Social Responsibility contest Paryz 2021'. At the bottom right, there is a 'HOTLINE' button with a phone icon.

VENDOR REGISTRATION

All potential suppliers shall be registered in KPO Database



Vendor registration in KPO Vendor Database does not guarantee the participation in a tender or contract award, but suggests that a registered company may be considered as a market research participant for provision of goods, works and services for further pre-qualification process or tender as the need arises.

VENDOR REGISTRATION

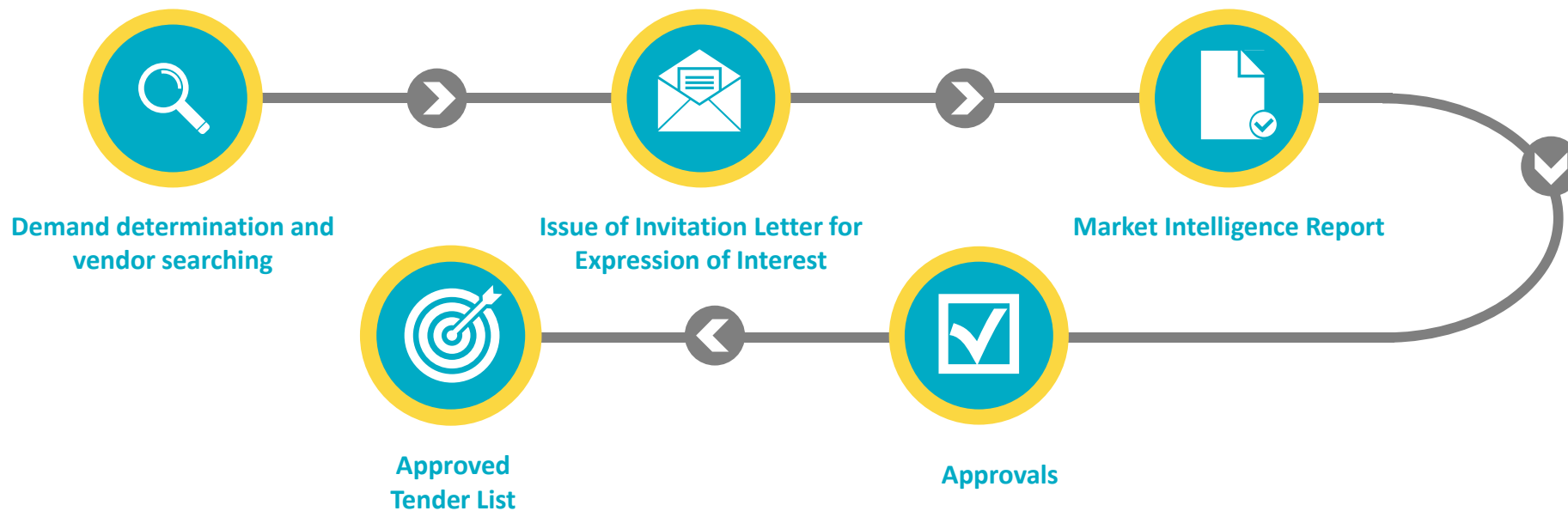
- To register in KPO Vendor Database, potential suppliers shall:
 - Download a questionnaire on KPO website – <https://kpo.kz/ru/postavshchikam/registraciya-v-baze-dannykh-postavshchikov-kpo>
 - Fill in the questionnaire for the preliminary vendor assessment and indicate activity codes
 - Attach copies of required documents
 - Submit the completed pack of documents for vendor assessment and registration by e-mail at MIVQ@kpo.kz
 - Contact phone: +7 (711336) ext. 4943, 4946, 2192
- KPO encourages Suppliers to update registration data on an ongoing basis, related to:
 - Work Experience in the declared categories of goods, works, services
 - Certification, accreditation
 - Reorganization
 - Contact persons

MARKET RESEARCH

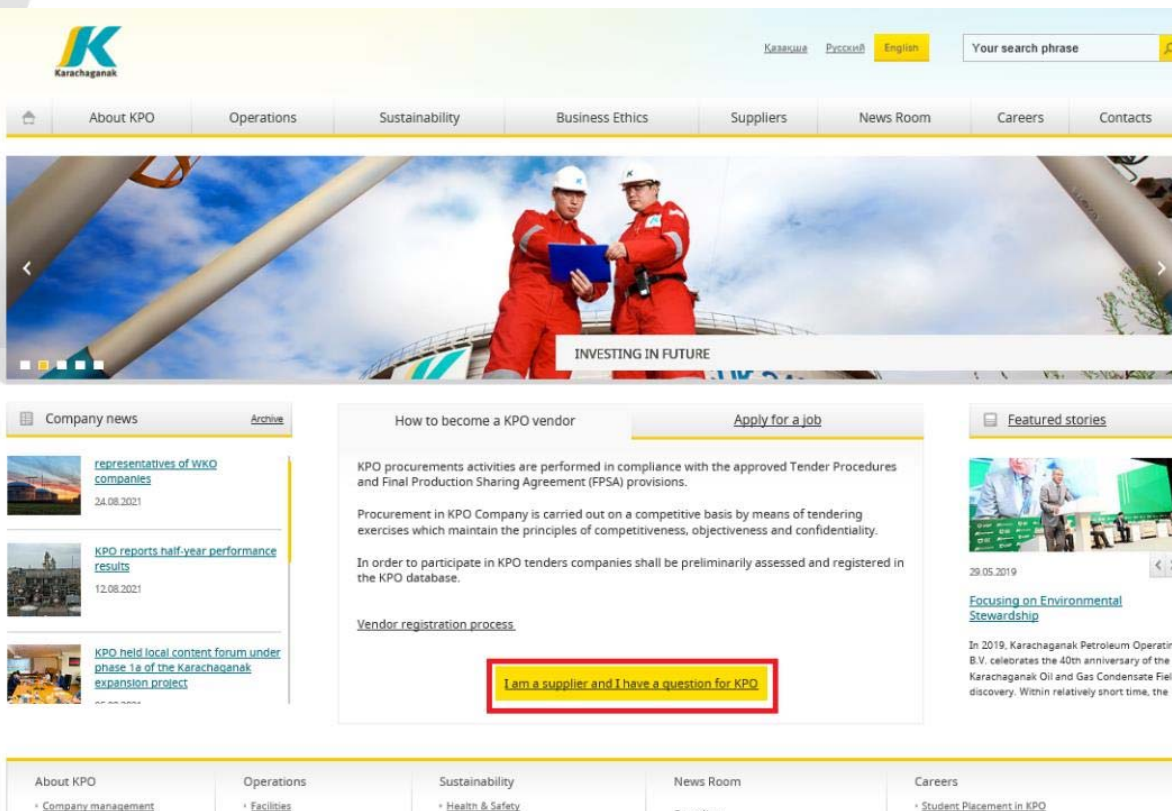
Purpose

- Define potential suppliers of goods, works, services who can perform as per KPO requirements
- Ensure free competition for KPO tenders

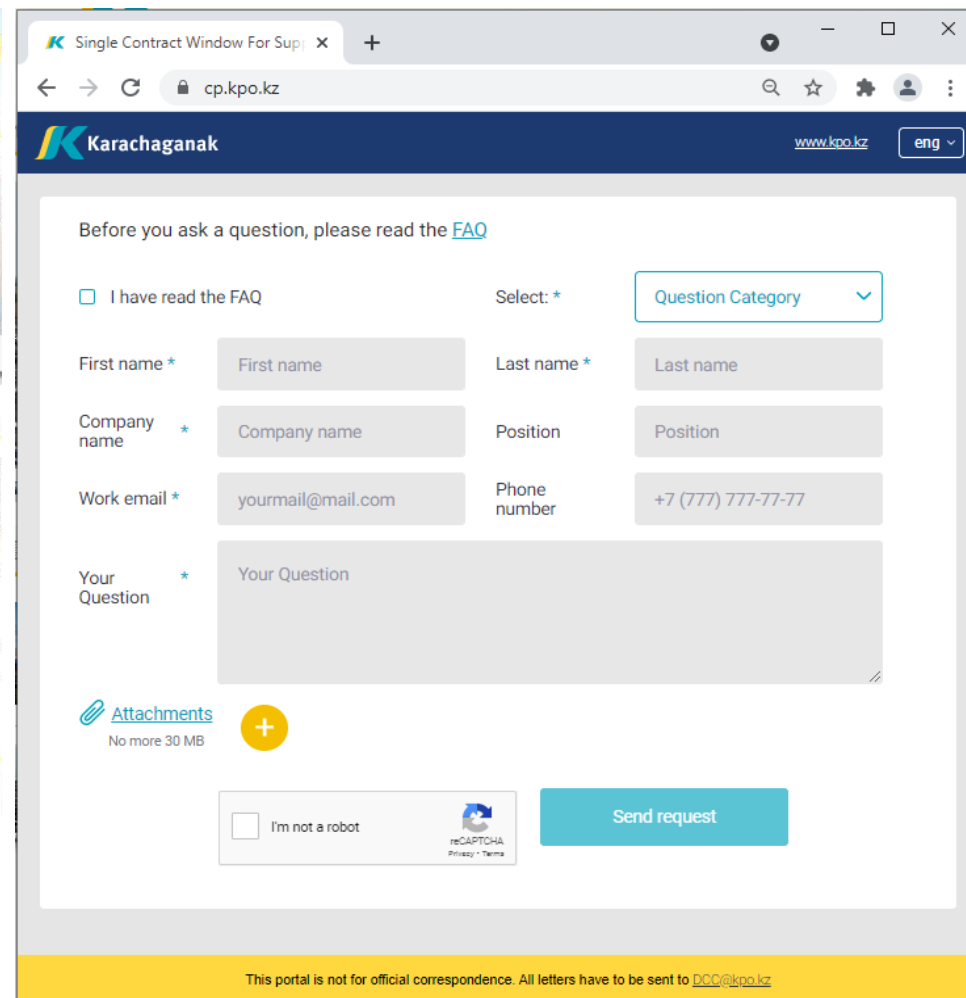
PROCESS



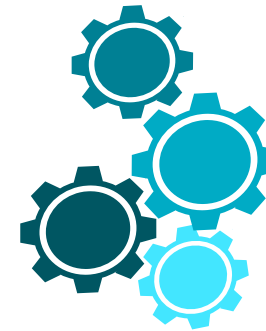
"SINGLE WINDOW" SYSTEM



The screenshot shows the Karachaganak website with a navigation bar, a large banner image of two workers in red suits, and a sidebar with news items. The main content area features a section titled 'How to become a KPO vendor' with a link to 'Apply for a job' and a highlighted button that says 'I am a supplier and I have a question for KPO'.



The screenshot shows a web browser window displaying the 'Single Contract Window For Suppliers' form. The form includes fields for First name, Last name, Company name, Position, Work email, and Phone number. It also has a 'Your Question' text area and an 'Attachments' section. A 'Send request' button is at the bottom right. The footer states: 'This portal is not for official correspondence. All letters have to be sent to DDC@kpo.kz'.

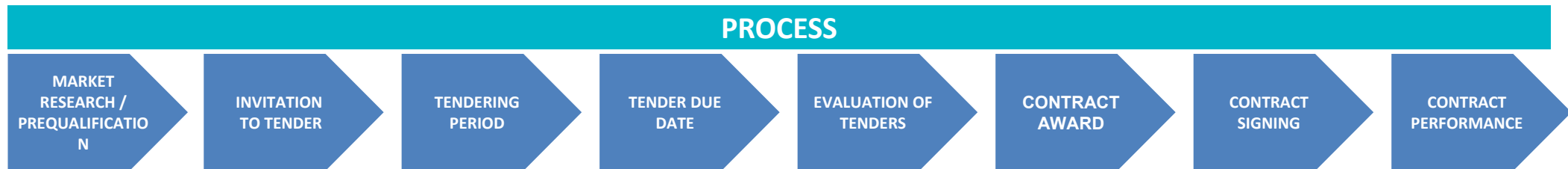


PROCUREMENT PROCESS

PROCUREMENT PROCESS

KPO shall perform the procurement activities in accordance with:

- the Final Production Sharing Agreement (confidential and intended only for the use of KPO, its Shareholders and the Republic) and the Joint Operating Committee's Tender Procedures (JOC)
- current legislation
- approved budget and work program



MAXIMUM ATTENTION SHALL BE PAID TO



**TENDER PACKAGES
SUBMISSION
REQUIREMENTS**



**TENDER PACKAGES
SUBMISSION
REQUIREMENTS THROUGH E-
BIDDING SYSTEM**
([Link to the instructions](#))



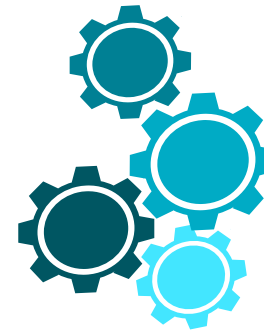
**INSTRUCTIONS
TO TENDERERS**



TENDER DUE DATE / TIME

TENDER DOCUMENTATION CONTENTS

1. Cover letter
2. Forms, that shall be mandatorily signed, stamped and provided within timeframe specified:
 - Tender Acknowledgement and Confidentiality Agreement
 - Form of Tender
 - Certificate of Corporate Ownership and Declaration of Compliance
3. A package of documents related directly to the tender subject itself
4. Instructions to Tenderers
 - Form of Contract includes:
 - Form of Agreement
 - Schedule A – General Terms and Conditions
 - Schedule B – Scope of Goods/Services to be Supplied and Specifications
 - Schedule C – Compensation and Payment
 - Schedule D – Health, Safety and Environment (HSE) requirements
 - Schedule E – Special Conditions
 - Schedule F – Statement of Local Content
 - Schedule H – Industrial Relations
 - Questionnaire for Tender Participants
 - List of goods and technical delivery conditions (if applicable)
5. Instructions for preparing a tender proposal:
 - Instructions to Tender Participants
 - Bid marking template



Mechanisms to support Kazakhstani Suppliers

KEY PRINCIPLES FOR KPO LOCAL CONTENT

In accordance with the FPSA, the Operator shall strive to maximize the use of GWS from Kazakhstani sources at each stage of the procurement process where procurement from such sources is justified in terms of price competitiveness, efficiency, operational parameters, terms of delivery and quality.

KPO, as one of the leading oil and gas companies in the Republic of Kazakhstan, strives to support the sustainable development of local suppliers in Kazakhstan and maximize opportunities for LC development, in accordance with the obligations of the FPSA and the legislation of the Republic of Kazakhstan.

The company fully supports the initiatives of the Government of the Republic of Kazakhstan aimed to the development of local suppliers, and recognizes the importance of attracting more local manufacturers to the Karachaganak project development. On this occasion, KPO is implementing various initiatives to develop local content.

Therefore, before implementing new processes, philosophies, optimization or development programs, KPO strives to:

- 1. Save the achieved LC level**
- 2. Increase the share of LC**
- 3. Continuously expand the range and list of purchased goods from local manufacturers**

MECHANISMS TO SUPPORT KAZAKHSTANI SUPPLIERS AND LOCALIZE PRODUCTION

NAME OF THE MECHANISM	DESCRIPTION
Early tender	<p>a form of Advance Procurement*</p> <p>The method of awarding the contract is a competitive tender process</p> <p>The goal is to organize the production of goods in the Republic of Kazakhstan.</p> <p>A tender for the supply of goods based on the results of which the Operator enters into a contract for the supply of goods with a suspensive condition or with a long-term delivery schedule until the Operator has a need for such goods.</p>
Trial Order	<p>Operator contract</p> <p>Contract award methods - Tender, Negotiation, Single source, Sole source.</p> <p>The purpose of such a contract is to purchase samples of Goods from Kazakhstani manufacturers for testing and checking for compliance with technical standards and operational requirements of KPO.</p> <p>Basic conditions of the Trial order</p> <ul style="list-style-type: none"> • Conformity of the Goods to the type for oil and gas operations • Minimum purchase volume • Objectivity of tests and inspections

***Advance Procurement** means a form of procurement as a result of which the Operator agrees a contract for goods the delivery of which may be delayed or subject to a multi-year schedule depending on Operator's requirement for such goods, including but not limited to Early Tenders.

MECHANISMS TO SUPPORT KAZAKHSTANI SUPPLIERS AND LOCALIZE PRODUCTION

NAME OF THE MECHANISM	DESCRIPTION
Contract in exchange for investment	<p>A contract in exchange for investment is a long-term contract concluded on a Single source basis, under which the supplier undertakes to produce goods of local origin that are the subject of a procurement contract in the territory of the Republic of Kazakhstan.</p> <p>Methods of contract award are negotiations, Single source basis.</p> <p>The goal is to organize the production of goods in the Republic of Kazakhstan.</p> <p>Basic terms of the contract in exchange for investment</p> <ul style="list-style-type: none"> • Long - term contract; • Single source basis; • Obligation to organize the production of goods of local origin on the territory of the Republic of Kazakhstan.
Kazakh Tender	<p><i>Procedure for participation of Kazakhstani suppliers</i></p> <p><i>The method of awarding the contract</i> is a competitive tender process exclusively among Kazakhstan suppliers of GWS.</p> <p><i>The goal</i> is to award contracts to Kazakhstani suppliers of GWS.</p> <p><i>Conditions for holding a tender among Kazakhstani suppliers</i></p> <p>Given that:</p> <p><i>Minimum number of Kazakhstan suppliers</i></p> <p>(ii) the presence of at least 5 pre-qualified Kazakhstan suppliers, the Contractor undertakes to conduct the tender exclusively among Kazakhstan suppliers.</p>

Thank You!

