PANORAMA

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THE MAGNIFICENT SEVEN

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DEAR COLLEAGUES AND FRIENDS!

Stability, reliability, safety, efficiency are the basic principles of the Caspian Pipeline Consortium's work throughout the history of the project, the main components of the company's good reputation in the hydrocarbon transportation market. The close-knit multinational team of CPC adequately copes with each new challenge of the time, successfully solving the tasks set.

In March of this year, the Consortium shipped over six million tons of oil from the single-point moorings of the Marine Terminal. In April, new metering units built as part of the Debottlenecking Program were connected and filled with oil. At other CPC facilities along the entire length of the oil pipeline from Tengiz to Novorossiysk, the implementation of DBNP is also on schedule, for the most part already 100% completed. We welcome summer with the 8,000th tanker since the start of CPC operations.

The company overcame the next peak of construction and installation works with high performance in the field of labor protection, industrial safety and environmental protection. According to an expert assessment, CPC has reached a new, independent level of Safe Work Culture according to the Bradley scale, which means the involvement of the team in the continuous improvement of labor safety — including both the company's personnel and employees of contractors.

Exactly 10 years ago, in May 2013, the first issue of CPC Panorama magazine was published. The magazine, as a worthy successor to the corporate newspaper, was intended to become a platform for communication between employees, exchange of opinions, revealing the creative potential of each of us. For 10 years, CPC Panorama has fully met expectations.

The magazine's publications are referenced by leading news agencies. On the pages of the publication, heads of regions, federal and regional ministries and departments, figures of science, culture and art share their opinions. Readers will learn about the various talents of CPC employees, their hobbies, travels, dreams, scientific discoveries and developments. The magazine's website is visited by thousands of people every day. It is worth noting the work of special correspondents who report from all objects of the pipeline system, climb the tanks, descend into the manifolds, go out to the open sea.

Paying due attention to the life and interests of the workforce, nature and cultural events in the regions of presence, the magazine in each of its issues reflects in detail the production indicators of the Consortium. They are consistently high, and this is our common merit — the result of the skilled work of each CPC professional in their workplace. We do this together, just like we do this magazine together.

N.N. GORBAN
GENERAL DIRECTOR
CASPIAN PIPELINE CONSORTIUM

AUTHOR
PAVEL KRETOV

OPEN DAY

AT THE BEGINNING OF APRIL 2023, JOURNALISTS OF KAZAKHSTAN AND INTERNATIONAL MEDIA VISITED MILE ZERO OF THE TENGIZ-NOVOROSSIYSK PIPELINE AND THE TENGIZ PS

Reporters from 11 media learned about the main technological processes of pumping, how the head PS differs from the intermediate pumping station, why the tank needs a floating roof and a mixer, what is an oil level and much more.

Rafael Ualiyev, Deputy Operations and Maintenance Manager of the CPC Eastern Region, explained to the guests that Tengiz PS is responsible for the operation of the section of the main oil pipeline from km 0 to 130. In front of the station fence there is a Tengizchevroil LLP terminal and a switching unit, from where oil is supplied to the CPC system via an aboveground pipeline. Crude oil enters the control unit, then passes through mud strainer and enters the metering units, where it is commercially accounted for.

"Thanks to the implementation of the Debottlenecking Program, the throughput of metering units has increased significantly", Rafael Ualiyev tells reporters. "Until recently, we had four lines – now there are six of them".

With the help of new LACT lines, the throughput capacity of the equipment has increased to 6.8 thousand m^3 per hour, which fully corresponds to the planned increase

in pumping volumes. It is assumed that after some time, Tengizchevroil will transport more than 6 thousand m^3 per hour through the CPC system.

According to the specifications, oil from the consignor is accepted with a temperature of no more than +50 °C. All quality indicators are strictly monitored in the testing laboratory of the Tengiz PS. And this is very important: if a deviation is detected and confirmed by repeated analysis, the dispatcher of the Operations Control Center of the CPC pipeline system can stop receiving.

In the laboratory, journalists were introduced to the procedure for sampling from the oil pipeline and the preparation of quality passports. For each batch of oil, acceptance tests are carried out, which include the determination of density, mass fraction of water, mass concentration of chloride salts and mass fraction of sulfur.

Today the Tengiz PS receives about 4,400 m^3 per hour, or 105.6 thousand m^3 of crude oil per day. Oil is driven first by booster pumps, then by mainline pumps. In this case, four twenty-thousanders tanks with floating roofs are used as a buffer. The latter, located directly on the oil surface, rising and falling with its level, prevent the formation of a gas-air mixture in tanks and, as a result, its emissions into the atmosphere.

The journalists asked how long these tanks would be enough if oil transportation through the pipeline was suspended, so as not to stop receiving from the shipper.

"It is difficult to make such a forecast, it depends on many conditions", explains Ondasyn Shakan, Tengiz PS Manager. "Firstly, our tanks are constantly in use, the minimum level in them must be at least 3.4 m. Now it is at around 4 m, and the maximum allowable level is 15.6 m. Secondly, Tengizchevroil also has a tank farm, and it will be filled in the beginning. Thirdly, the oil producing company in such cases has the opportunity to switch to the minimum mode of field development.

TODAY THE TENGIZ PS RECEIVES ABOUT 4,400 M^3 PER HOUR, OR

105.6

THOUSAND M^3 OF CRUDE OIL PER DAY

Almost completed at the station, DBNP is a continuation of the successfully completed CPC Expansion Project in 2011–2017. At that time, the station, built in 1986–1989, was seriously modernized, the pumping capacity was doubled, and advanced monitoring and control systems were introduced. Among the major works already within the framework of DBNP are the phased replacement of the main pump units, the commissioning of a new booster pump station and the site of frequency-controlled converters, the construction of two new twenty-thousanders.

"All work related to the increase in throughput capacity of the CPC at the station was completed in 2022", commented Nurlan Baizakov, Deputy Construction Office Manager.

Due to the high degree of automation, the PS staff is small. During the night shift, only five people monitor the correct operation of the equipment – shift supervisor, operators of the pump station and process units, an electrician and an instrumentation technician. During the day, the engineering staff is connected to them: PS Manager, Deputy PS Manager, system administrator, communications engineer, electrical engineer, mechanical engineer, instrumentation engineer and HSE engineer.

The PS is a fire hazardous facility, so it is equipped with a modern automatic fire extinguishing system. The fire pump station maintains a constant pressure in the annular fire pipeline. There are emergency water tanks. The performance of the most powerful fire pump is an impressive 570 m^3 per hour.

The next head Atyrau PS along the oil flow operates at the 204th kilometer of the CPC pipeline. Here, in addition to 4,500 m^3 of Tengiz oil per hour, about 5,000 m^3 is added today. Crude oil come from the Kashagan, Karachaganak fields and from other producers. But this is a topic for a new excursion.

CPC PRESS SERVICE

DBNP IN ATYRAU REGION

PRESS CONFERENCE OF THE CONSORTIUM WITHIN THE XX NORTH CASPIAN REGIONAL EXHIBITION OF TECHNOLOGIES AND EQUIPMENT OF THE OIL AND GAS INDUSTRY "ATYRAU OIL AND GAS" WAS DEDICATED TO THE IMPLEMENTATION OF THE DEBOTTLENECKING PROGRAM AT PRODUCTION FACILITIES AND CHARITY ACTIVITIES IN THE REGION

Kairgeldy Kabyldin, Deputy General Director, Republic of Kazakhstan Government Relations, CPC-K and Victor Miroshnichenko, CPC-K Operations and Maintenance Manager, who took part in the press conference, briefed correspondents of Kazakhstani and international media on the progress of the implementation of the Debottlenecking Program adopted by the Consortium in 2019.

DBNP is a number of projects united in a single Program and implemented on the territory of Kazakhstan and Russia. At the end of 2022, during the implementation of the DBNP, the main task was achieved: the mechanical readiness of the pipeline system was ensured for the transportation of about 72.5 million tons of oil per year from Kazakhstan and up to 81.5 million tons of oil per year through the Russian Federation.

In Kazakhstan, the DBNP facilities are Tengiz PS and Atyrau PS. On the territory of these oil pumping stations, new mainline and booster pumping units with electric drives, a new mainline pumping unit with a gas turbine drive, process and auxiliary equipment, equipment for control and communication systems (CCS) and fire and gas detection systems (FGDS) were put into operation, technical re-equipment of the crude oil quantity and quality measuring system.

More than 300 employees of contractors and 35 units of equipment were involved at the Program facilities at Tengiz PS. 100% completed work within the framework of DBNP at the Atyrau PS, which is considered the second head station. About 100 highly qualified specialists and 16 units of construction equipment were involved in the construction.

Currently, the implementation of DBNP is ongoing. In order to increase the electric capacity at Tengiz PS, it is planned to put into operation new external power supply facilities this year. Two new tanks with a capacity of 20,000 m^3 each will also be put into operation, which will allow, in conditions of increasing pumping volumes, to provide an oil accumulation reserve in the station's tank farm up to 120,000 m^3.

The investment costs of the Program amount to 599.9 million US dollars, of which CPC-K accounts for 156.4 million US dollars and 443.5 million US dollars – for CPC-R. As with the implementation of the Expansion Project, part of the allocated funds under DBNP is directed to finance charitable projects to support education, healthcare, infrastructure development and social programs of the Atyrau region.

CPC PRESS SERVICE

RIGHT ON SCHEDULE

ON MARCH 25, THE SCHEDULED REPLACEMENT OF THE FLOATING HOSES OF THE SINGLE-POINT MOORING SPM-2 STARTED AT THE CPC MARINE TERMINAL. ABOUT THE PROGRESS OF THESE WORKS AND OTHER LOCAL EVENTS AT SEA AND LAND IN A SPECIAL CPC PANORAMA REPORT

Crude oil is transported from the SPM to the tanker through a system of two floating flexible hose connections (strings). Including marine rupture joint (MPC), rotary valve and eccentric connection, the total length of the inner floating hose string is 265 m, the outer one is 276 m. The outer string consists of 26 hoses, the inner one consists of 25 hoses.

If the weather is good, the replacement of the SPM-2 floating hoses scheduled for replacement in 2023 should be completed within 35 days. Prior to this operation, the reserve of critical components in the warehouse of the Marine Terminal was replenished. At the beginning of April, the hose replacement work was supervised by the Consortium management. As of April 21, while ensuring all industrial and environmental safety measures, the outer and inner hose strings were disconnected from the SPM, all 11 hoses planned for replacement were dismantled, new hoses were installed and the disassembled hoses were reassembled.

Currently, DBNP work at CPC Marine Terminal is ongoing and includes two projects: upgrade of existing Pressure Control Stations (PCS) and construction of three new Lease Automatic Custody Transfer (LACT) units. 2022 saw the completion of upgrade of two Pressure Control Stations, completion of the main LACT equipment installation, start of commissioning of Control Room utilities and LACT equipment. Completed installation of drainage tanks, buried piping, wells, underground and above ground pipelines. During the scheduled shutdown on April 10–14, 2023, three new LACT were connected to the pipeline system and filled with oil.

Also in 2022 new thin-walled cases, sealing sleeves and breather valves were installed inside the tanks to ensure reliable operation of 100,000 m^3 SVFRTs at high crude oil temperature. Among other critical activities at CPC Marine Terminal in 2022, one may note the change-out of marine hoses and scheduled pass of pigs in subsea pipelines at all three SPMs.

At the end of April, comprehensive drills were held to confirm CPC readiness for actions to localize oil and oil products spills at the territory of the Company's Marine Terminal. The participants of the event worked out the deployment of professional emergency rescue teams in case of depressurization of the SVRFT-100000 tank, performed a conditional evacuation of the victims from the danger zone, extinguished the oil that "leaked" from the pipeline. As always, the legend of the exercises did not provide for the "malfunction" of any equipment: during such events, the specialists of the Marine Terminal invariably demonstrate the operability of all emergency systems in the complex. The replacement of floating hoses of SPM-2 was completed on April 29, after which the single-point mooring was tested for tightness of connections and was put into operation.

AUTHOR
PAVEL KRETOV

ON THE WAY TO NEW ACHIEVEMENTS

AT THE END OF MARCH 2023, A MEETING WAS HELD IN ASTRAKHAN ON THE RESULTS OF CPC'S OPERATING ACTIVITIES IN 2022. THE HEADS OF STRUCTURAL DIVISIONS OF THE CONSORTIUM DISCUSSED THE RESULTS OF CLOSE-KNIT TEAMWORK AND PLANS FOR THE CURRENT YEAR

Opening the meeting, CPC General Director Nikolay Gorban noted that "2022 was not an easy year, the current one also does not promise concessions, but we will be able to work even more efficiently, taking into account all the experience of the previous year".

Regional leaders of the Consortium presented their reports in the traditional order – "in the course of oil". Deputy Regional Manager of the Eastern Region Viktor Miroshnichenko reported on 4.8 million man-hours worked without injuries and 1.7 million km of vehicle run without recorded accidents. An important event in the field of labor protection was the holding of a Safety Day in Atyrau in September 2022, which was attended by almost 700 people. The team of the Eastern Region took the third place among the teams of the Consortium.

SERGEY POTRYASOV

THE EFFICIENCY OF WORK ON BRINGING THE DEPTH OF THE PIPELINE TO THE DESIGN MARKS IN AREAS WITH NOMADIC SANDS INCREASED

To practice preparedness for emergency response, the ER team conducted seven oil spill response and fire fighting exercises. Qualitative interaction was also noted at joint trainings with Tengizchevroil LLP.

In 2022, in the Kazakhstan segment of the CPC pipeline system, the efficiency of work on bringing the depth of pipeline to the design marks in areas with nomadic sands increased 4.5 times. The detection of insulation defects on the linear part has doubled.

In his speech, CPC Central Region Manager Konstantin Rybak said that all employees of the division were certified in the field of labor protection, industrial and fire safety. The reporting period was marked by an increase in the number of works with an increased hazard class, which was due to the implementation of the Debottlenecking Program.

In mid-2022, the region successfully passed a recertification audit of the HSE management system for compliance with the requirements of international standards ISO 14001:2015 and ISO 45001:2018. In the second half of the year, internal and external audits of the Quality Management System according to ISO 9001:2015 standard took place. Among the significant results of 2022 is the elimination of detected defects in the pipeline wall using repair structures.

4,5 TIMES

IN THE KAZAKHSTAN SEGMENT OF THE CPC PIPELINE SYSTEM

Sergey Potryasov, Regional Manager of the CPC Western Region, reported on the achievement of almost 32 million man-hours without injuries and incidents and about 80 million km of vehicle mileage without accidents. The figures for 2022 alone amounted to 2.9 million man-hours and 9.7 million km. Over 450 training sessions were organized with fire brigades and members of voluntary fire brigades. Fire-tactical exercises were conducted at PS-4 and PS-7. Oil spill response exercises were held

KONSTANTIN RYBAK

in the Stavropol and Krasnodar Krai on the Tashla and Kuban rivers.

CPC's lead contractor for the operation and maintenance of the Consortium's pipeline system, STARSTROY LLC, completed 9.7 thousand work orders in the Western Region in 2022. Scheduled maintenance of equipment accounted for 73% of labor costs.

IN 2022, THE CPC MARINE TERMINAL SHIPPED

527

OIL TANKERS FOR EXPORT

The CPC Marine Terminal shipped 527 oil tankers for export in 2022. Of these, Suezmax accounted for 259 tankers and 268 for Aframax. Tankers delivered 58.7 million tons of CPC Blend oil to world markets. Regional Manager of the CPC Marine Terminal Alexey Pelipenko, speaking about the results of 2022, noted that the planned maintenance and current repairs of the equipment were carried out in accordance with the schedules. For reliable operation of SVFRT-100000 tanks under conditions of increased oil temperature, new thin-walled sleeves, sealing sleeves and breathing valves were installed in them. Other important works include the replacement of marine hoses and the planned passage of cleaning devices on underwater pipelines on all three single-point moorings.

The participants of the meeting considered the issues of the state of the linear part of the Tengiz-Novorossiysk pipeline, reliability management, and also summed up the results of the production activities of the regions in 2022. This assessment has been carried out since 2018 and takes into account such indicators as compliance with the requirements of industrial, fire, environmental safety, labor protection, traffic safety; the effectiveness of the implementation of one-time projects, the development of a quality management system, and others. At the end of 2022, the Eastern Region of the CPC was recognized as the winner. To the applause of the meeting participants, the General Director of the Consortium Nikolay Gorban presented a diploma to the Deputy Regional Manager of the Eastern Region Viktor Miroshnichenko.

CPC Technical Director – DBNP Manager Igor Lisin reported on the implementation of CPC capital projects in Russia and Kazakhstan, as well as on the achievement of the goals and objectives of DBNP in 2022.

As part of CPC's main activities, in the direction of the implementation of capital projects in 2022, 115 production activities of various directions (reliability, safety, infrastructure improvements, etc.) were simultaneously

IGOR LISIN

in progress at various stages of their life cycle. In general, the stages of key and critical projects for the CPC scheduled for implementation in 2022 were completed. For certain projects, the deadlines for the completion of work were postponed due to reasons beyond the control of the company, usually related to the influence of external factors.

As demonstrated during the presentation, the project load in the period from 2021 to 2022 was at a consistently high level. In 2023, a decrease in the number of one-time capital projects being implemented is also not expected. At the same time, in the coming years, there will be an active phase of implementation of such major production programs and projects of CPC as the program for replacing sections of the linear part in the Central Region, the program for the modernization of engineering and technical means of security and communications, the program for replacing uninterruptible power supplies (UPS) that have exhausted their service life and the program replacement of the SPM at the CPC Marine Terminal.

VICTOR MIROSHNICHENKO

As for DBNP, last year a key milestone of the Program was achieved – completion of all work at the Tengiz PS and Astrakhanskaya PS related to ensuring the mechanical readiness of the CPC oil pipeline system for an increase in pumping volumes. In 2022, work on DBNP at A-PS-4A, A-PS-5A, PS-2, Komsomolskaya PS and Atyrau PS was completed, and at some stations ahead of schedule. Implementation of the DBNP will continue in 2023 in accordance with the current schedule.

IN 2022, THE HIGHEST INDICATOR IN THE FIELD OF COMPANY STAFF TRAINING WAS ACHIEVED

Among other speeches heard by the participants of the meeting was the report of Alexandra Rabinovich, Personnel Training and Development Team Leader. She reported that in 2022, the highest rate of training implementation in 5 years was achieved. CPC is actively developing new e-learning courses. In 2022, e-learning was assigned over 9.5 thousand times. The corporate training and development portal has become even more convenient – thanks to integration with the Task Center, employees immediately see all the courses and tests assigned to them. For managers on the portal, information about the history of training of each employee of the department is available. Positive dynamics in the development of training by the internal trainers of the company was noted.

ALEXANDRA RABINOVICH

All decisions taken at the meeting were recorded in the minutes. Their responsible execution will allow the Consortium team to confidently fulfill the tasks set, increase production indicators and work efficiency in the current 2023.

AUTHOR
PAVEL KRETOV

THE MAGNIFICENT SEVEN

IN 2022, THE TEAM OF THE CPC WESTERN REGION AND CONTRACTORS WORKED ABOUT 3 MILLION MAN-HOURS WITHOUT INJURIES AND INCIDENTS. VEHICLE MILEAGE WITHOUT ACCIDENTS AMOUNTED TO 9.7 MILLION KM. IN THESE INDICATORS THERE IS A SIGNIFICANT CONTRIBUTION OF THE WORKERS OF PS-7, LOCATED NEAR THE VILLAGE OF STAROMYSHASTOVSKAYA, KRASNODAR KRAI

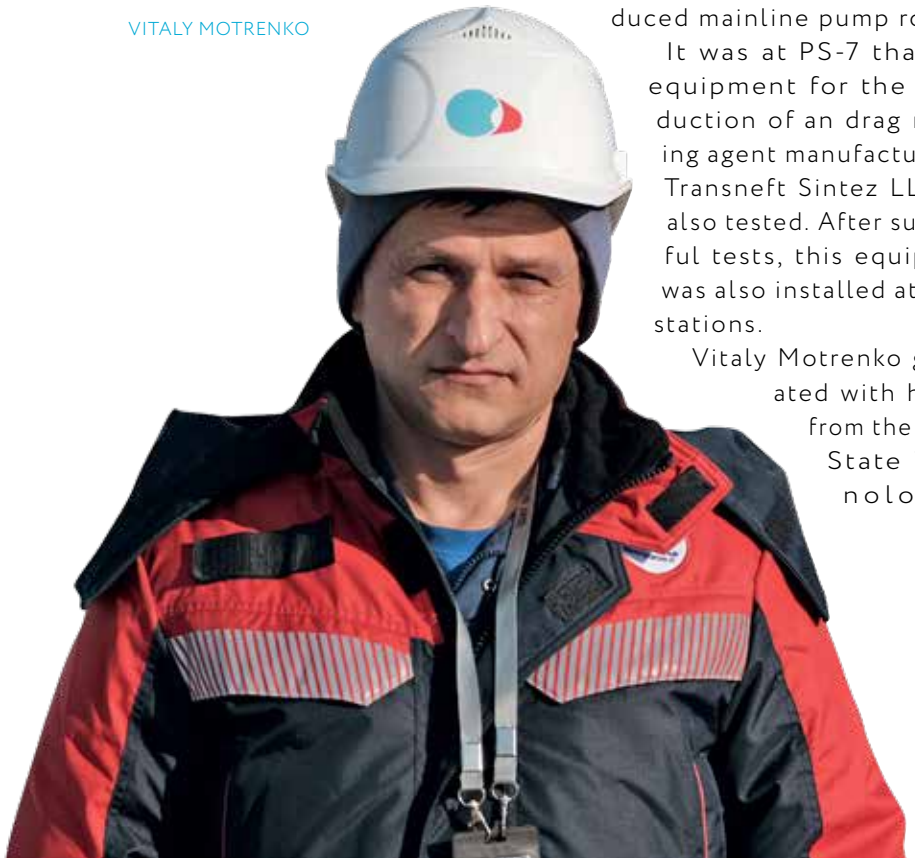
Typical intermediate pump station without a tank farm with four mainline pump units was commissioned in January 2016 as part of the Expansion Project. The PS is connected to the Tengiz-Novorossiysk oil pipeline at the cleaning and diagnostic tools checkpoint at km 1353. Before getting into the main pumping units, oil passes through a platform of mud strainers with a fineness of 4 mm. After mud strainers, oil enters the main pump station, the site of the pressure control unit and the site of the shut-off valve unit. To protect the oil pipeline section from water hammer in the section from PS Kropotkinskaya to PS-7, the station is equipped with a pressure mitigating system. Also, the systems and equipment of PS-7 include: a fire extinguishing system with two fire-fighting water tanks of 400 m^3 each, a water supply system, sewage systems (industrial rainwater and domestic).

"We can say that our station is experimental: many of the technologies that are first introduced here are then distributed to all facilities in the Western Region", says Vitaly Motrenko, PS-7 Manager. "So, within the framework of import substitution, we are now testing a domestically produced mainline pump rotor".

IN ORDER TO INCREASE PRODUCTION SAFETY, RAILINGS ARE EQUIPPED EVEN THE SITES AND PASSENGES WHERE THE HEIGHT DOES NOT EXCEED

70 CM

VITALY MOTRENKO



It was at PS-7 that new equipment for the introduction of an drag reducing agent manufactured by Transneft Sintez LLC was also tested. After successful tests, this equipment was also installed at other stations.

Vitaly Motrenko graduated with honors from the Kuban State Technological University. For about nine years, he worked in the Krasnodar Regional Oil Transportation Department of Chernomortransneft JSC at the Novovelichkovskaya PS, first as a mechanical engineer at the Department of Logistics, then as a PS deputy manager and PS manager. In 2013, he moved to CPC.

During the period of operation of PS-7, a number of works were carried out aimed at improving reliability. The main ones are: replacement of main mud strainers, replacement of power cables to electric motors of mainline pump, replacement of electric drives of pressure regulators. Also, in 2022, the pre-chambers of the ventilation systems located in the production buildings of the station were optimized. Pre-chambers are a preliminary room in front of the supply air purification system. The operating experience of the pump station has shown that during

construction, the lining of the walls of the pre-chambers was made of materials of insufficient strength and had insufficient rigidity of the fasteners. Therefore, they were replaced.

The staff of the "seven" is a team of caring people, so every year something is being improved, modernized at the PS.

"The plant staff actively participates in the development of the Safe Work Culture", notes Vitaliy Motrenko. "Employees' suggestions are constantly being put into practice: we'll lay a path somewhere, we'll install railings somewhere, we'll mount a service platform somewhere".

In 2016, there were no maintenance sites at the main pumping units yet: they were not provided for by the project. Today, specialists have convenient access for maintenance, the operating personnel of PS-7 – for technical inspections. Also, there were no service sites for tanks with fire-fighting water in the project. Now that it's done, instrumentation technicians don't have to inspect the devices while standing on the awkward slope of a concrete pavement.

"In order to improve the safety of production, we extended the installation of railings even to those platforms and passages where the height does not exceed 70 cm", continues the head of the station. "In accordance with the rules and regulations, this is not required, but with ice and rain there is a risk of slipping, getting injured".

Such railings appeared on the platforms for servicing shut-off valves of main pumps, pressure mitigating systems and other areas. Convenience is valued by both operating personnel and equipment maintenance specialists.

"At the monthly meetings of the Plant Safe Work Culture Committee, we carefully study the observation cards from our colleagues and representatives of contractors, in which they report on the risks or potentially unsafe conditions they have identified", says Vitaliy Motrenko. "I must emphasize that all specialists and managers working with cards note an improvement in the quality of both observations and formulations. We almost never see unreasonable cards anymore".

Of course, occupational safety is not an area in which something can be left to chance. The methodology and sequence of such work at the plant is controlled by the HSE Engineer Vitaly Shpilko.

"I came to CPC in 2011 and already then I noted that the level of labor protection organization here can serve as an example for many companies operating in Russia", recalls Vitaly. "A typical example: in the Consortium, you are more likely to see a person who returned to the office from

the production area and forgot to take off his helmet than someone who would have gone out to the work site without it. Now we have moved to a new, even more reactive level, when each employee consciously approaches the improvement of working conditions and puts forward his own initiatives at all levels".

VITALY SHPILKO

It was this habitual self-discipline that helped the PS team to navigate through the pandemic with confidence. 99% of the station staff were vaccinated. And even today, when the incidence of coronavirus in the world has significantly decreased, contacts between operational personnel and contractors are minimized, and you can still see a sanitizer on every table.

"In 2020, it was, of course, more complicated. I had to pick up part of the work from those who went on sick leave or to work remotely", recalls Sergey Rodionov, Shift Supervisor, who has been working at the Consortium for about 10 years.

It can be said that fate itself persistently led him to CPC. Judge for yourself: he was born in the oil capital of Kazakhstan, the city of Atyrau, then worked for Karachaganak Petroleum Operating, one of the largest suppliers of oil to the CPC pipeline system. In Astrakhan, Sergei received a second higher education in the specialty "oil and gas business".

Alexander Degtyarev, Technician for Instrumentation, had a chance to participate in the construction of PS-7. After the completion of the CPC Pipeline System Expansion Project, Alexander worked for a while at the neighboring PS-8, and then returned to PS-7.

"The profession of instrumentation technician is interesting and responsible", Alexander Degtyarev believes. "Here at the station I supervise the work of more than one and a half thousand instruments. These are pressure gauges, pressure transducers, thermometers, temperature and vibration sensors, various secondary electronic devices and much more".

The equipment, which has yet to be used at the station, is waiting in the wings in the storage facilities of PS-7.

"Our warehouse, of course, is smaller than at the neighboring Kropotkinskaya station, but it is also equipped with a modern shelving system", says Storekeeper Alexander Miroshnikov. "We keep records of material assets using the latest data collection terminals. Equipment that requires compliance with the temperature regime is stored in warm rooms".

AUTHOR
PAVEL KRETOV

UNDER RELIABLE PROTECTION

AFTER 1,239 KM THROUGH THE CPC PIPELINE, OIL REACHES THE LARGEST CONSORTIUM STATION IN RUSSIA – KROPOTKINSKAYA PS. HERE, HYDROCARBONS CAN QUICKLY TRANSIT TO THE MARINE TERMINAL. OR MAYBE IT WILL BE DELAYED BY TURNING INTO THE TANK FARM

Usually, crude oil are pumped through the pipeline system using tightline process, but there is also a backup scheme.

"It is called floating tank process, says Stanislav Tulnov, Tank Farm Operator of the Kropotkinskaya PS. "It is resorted to during any scheduled work on the linear part behind the pumping station or if stormy weather does not allow loading tankers near Novorossiysk, and the Marine Terminal's Tank Farm is already close to fullness".

Of course, the mixture cannot enter the tank farm directly from the main oil pipeline, where the working pressure reaches 64 atmospheres. First, it goes to the pressure control unit (PCU).

The duties of the tank farm operator include monitoring the condition and operability of mechanical and technological equipment. Every two hours, he makes a detour, checking the serviceability of the nodes, valves, seals, etc. If contractors carry out scheduled maintenance, the operator checks the correctness and completeness of the work, monitors compliance with labor protection requirements.

"In 2022 – early 2023, we cleaned two twenty-thousanders, preparing them for technical re-examination", says Oleg Shcherbinin, Manager of the Kropotkinskaya PS. "Studies have shown the good condition of the walls and bottom of the tanks, but also revealed that the anode grounding of the CP (Cathodic Protection) system is close to the exhaustion of its resource".

FOR CATHODIC PROTECTION OF SVFRT-20000, SAND BOWLS ARE PROVIDED INSIDE THE FOUNDATIONS, IN WHICH

22

ELECTRODES ARE PLACED

The tank farm of the Kropotkinskaya PS consists of four tanks: two SVFRT-50000 and two SVFRT-20000. While the first pair was built several years ago as part of the CPC Pipeline System Expansion Project, the second pair has been in operation since 2001. Once every eight years, the tanks undergo a complete technical re-examination.

Cathodic protection of the bottom of the SVFRT-20000 according to the project was made with the placement of anodes under the tank inside a concrete bowl with sand with a diameter of almost

40 m and a height of 1 m. 22 electrodes evenly located in the sand ensure the distribution of the protective current.

After the examination, one of the SVFRT-20000 was returned to operation. On the second tank, experimental work was carried out to select a solution for the anode repair method. For this purpose, specialists from NII-Transneft LLC were invited.

"We have to make a difficult choice", explains Oleg Andreev, Senior Engineer for Cathodic Protection, CPC Western Region. "The first option is akin to a major overhaul: cut out the bottom and change the anode ground electrodes inside. The second method is less ambitious: to drill a foundation and insert new electrodes into the sand. There is a third option – to use a ring of flexible anodes around the foundation of the tank".

The main requirement for providing CP is a uniform distribution of the protective current on the object. For this, in addition to the electric rectifier and the anode, the CP system includes networks of drainage cables, special measuring electrodes and control and measuring points. The operation of the system is affected by the condition of pipeline insulation, seasonal changes in humidity and temperature, stability of external power supply.

Through the SCADA system, CPC specialists closely monitor the operation parameters of the electrochemical protection systems both at the five PSs in the region and at the main oil pipeline. CP systems performance surveys are conducted every five years. Thus, during the first survey of the linear part of the Western Region in the Stavropol and Krasnodar Krai (525 km) in 2003, it was determined that the design of 15 cathodic protection stations were not enough. In 2004, five more stations were built. Later, in connection with the construction of high-voltage lines VL-110, VL-220 and VL-500 kW near the oil pipeline, additional devices for suppressing induced alternating currents were installed.

The tank farm of the Kropotkinskaya PS, like other storage volumes along the entire length of the Tengiz-Novorossiysk pipeline, plays the role of a buffer to maintain a certain transportation capacity required at a particular moment. Ensuring the operability of the tank farm is an important production task that is successfully solved.

OLEG SHCHERBININ

AUTHOR
PAVEL KRETOV

MORE PERFECT EVERY DAY

TODAY, CPC RECALLS WITH A SMILE THAT WHEN IN THE MIDDLE OF THE LAST DECADE THE CONSORTIUM WAS BUILDING PUMP STATIONS ON THE TERRITORY OF THE STAVROPOL KRAI, THEY WERE AFRAID: IT WILL BE DIFFICULT TO FIND QUALIFIED SPECIALISTS FOR THEIR ON-SITE OPERATION AND THE STAFF HERE WILL WORK ON A SHIFT BASIS, COMING FROM OTHER REGIONS OF RUSSIA

These fears, fortunately, were not justified. Despite the fact that CPC PSs became the first production facilities of this kind in the region, among the inhabitants of Stavropol there were enough professionals who were able to operate the complex equipment of oil pipeline transport. During the construction of PS-5 in the Izobilnensky district, not a single incident or violation of safety requirements was allowed, and the operating and maintenance personnel of the station continued the same glorious tradition.

The commissioning of the facility in 2017 made it possible to additionally create 122 permanent jobs for the residents of the region. 25 of them are CPC operational personnel.

Roman Shubenok, Deputy Manager of PS-5, has been engaged for many years in the construction of oil pipelines, pump stations and marine terminals for Transneft PJSC for many years. Since 2011, as a member of the CPC Project Management Directorate, Chernomortransneft JSC took part in the construction of PS-4 and PS-5. After the commissioning of the latter, he was hired here.

"The construction of the facility was accompanied by frequent changes to the project for such a case", Roman recalls. "Somewhere

the Consortium was the initiator, somewhere we, as the curators of the construction. We improved, tried to make it more reliable".

Four main pump units driven by electric motors were installed at the station. Mud strainers, pressure control unit, DRA injection system, life support systems of the PS were installed. In addition, an automatic foam extinguishing system and a pressure mitigating system were installed. The latter includes four discharge lines with Danflo valves and four underground tanks of 100 m^3 each, as well as de-oiling pumps.

Before starting work on the site of the future PS-5, fertile soil was cut and preserved. Subsequently, it was used for landscaping the territory of the station and reclamation of the soil. Today, almost 7 thousand m^2 of lawns have been planted at the station, which is comparable to the area of a standard football field. Dozens of fruit trees and no less decorative ones please the eye. Here and juniper, and arborvitae, and barberry, and roses – all this is neatly trimmed and looks more like a park than an industrial zone.

The design of the station provided for two wastewater treatment systems: biological treatment facilities for domestic wastewater and treatment facilities for industrial and rainwater with subsequent post-treatment at oily wastewater filtration plants. At all facilities, a closed cycle of operation is organized without wastewater discharge into the nearest natural reservoirs. After passing through all the stages, the purified water is accumulated in its own waterproofed evaporation ponds. In 2022, card No. 2 was repaired, replacing the filling of expansion joints with a special sealing material.

"The complexity of this work was that it can be done only in the warm season", says the PS-5 Deputy Manager. "However, the contractor coped without remarks".

An important project of recent years for PS-5 was the repair of ventilation facilities. Initially, the partitions in them were made of cement-bonded particle boards. During the repair process, they were replaced with more practical and reliable composite panels. Almost 900 m^2 of slabs were dismantled. The work was carried out during scheduled shutdowns and when the PS was in reserve due to the technological regime, since the ventilation system is critical for blowing the electric motors of the main pumps.

It is impossible not to mention the replacement of the concrete base of the site of mud strainers in the area of gate valves with a diameter of 1000 mm. The new foundation increased the reliability of the equipment and, thanks to the installation of an additional well for receiving rainwater, improved its outflow from the site.

The operating experience of PS-5 was also taken into account during the construction of the turnaround site with parking for 20 cars. Initially, there was a crushed stone coating, which was inconvenient for equipment maneuvers. Now everything has become much more comfortable: concrete slabs, a roof over cars, a lighting system.

"We can say that every year and even every month the station becomes more and more perfect", says Roman Shubenok. "For example, in our region, the wind load is a rather high risk. Thanks to constant observations, we identify where and which parts of ventilation, cable rack tray covers and other equipment need to be strengthened".

ROMAN SHUBENOK

AUTHOR
DMITRY KONSTANTINOV

DEVELOPMENT TOOLS

ANALYZING CPC'S ACTIVITIES IN THE FIELD OF LABOR PROTECTION, INDUSTRIAL SAFETY AND ENVIRONMENTAL PROTECTION IT IS IMPOSSIBLE NOT TO NOTE MANY NEW SOLUTIONS IMPLEMENTED IN THIS DIRECTION IN 2022 AND AT THE BEGINNING OF 2023. INTERVIEW WITH DEPUTY GENERAL MANAGER (HSE, RUSSIAN FEDERATION) SERGEY POLOVKOV SPECIFIES EACH OF THESE INNOVATIONS

Sergey Alekseevich, please rate 2022. How much did it turn out to be forced in the direction of HSE? Interdepartmental inspection of oil pipeline facilities, the most intensive phase of the Debottlenecking Program, unique offshore repairs at two SPMs and cleaning the seabed of the Marine Terminal from the "echoes of war" — what else happened that is significant in terms of focusing attention on issues of labor protection, industrial safety and environmental protection?

In general, 2022 in the field of HSE was quite successful, given the rush hour at the construction sites of DBNP and a large number of ambitious goals and targets. All planned key indicators of CPC in the field of health, safety and environmental protection were achieved in full, there were no accidents, fires or other emergencies at the Consortium's facilities. A significant amount of work has been completed to revise the oil spill response plans and conduct exercises with the involvement of state supervisory authorities. A stationary post of the atmospheric air quality control system (AQCS) was put into pilot operation in the area of oil shipment at the Marine Terminal. A sanitary protection zone for the MT Tank Farm was established and entered into the USRN.

CPC HSE Strategic Plan 2022–2024 — what is the meaning, content, goals and requirements of this document? Has the plan been fulfilled for 2022?

The HSE Strategic Plan for 2022–2024 has been developed taking into account the lessons learned from CPC incidents, the results of an independent diagnosis of the level of CPC Safe Work Culture and the results of the practical experience of the Caspian Pipeline Consortium, shareholder companies and the oil industry as a whole. The implementation of this plan is aimed at improving the HSE management system, transforming the level of the Safe Work Culture and developing leadership, which is another step towards achieving more effective risk management specific to our industry.

To ensure the successful implementation of the plan, each senior manager is assigned a specific strategic goal facilitator to provide personal input and support the implementation of the set goals. The implementation of the Strategic Plan contributes to the successful achievement of the overall goal of CPC — zero injuries and accident-free operation. All tasks of the Strategic Plan scheduled for implementation in 2022 have been completed.

Adopted at the beginning of 2022, the Enterprise Standard "Leadership in the Development of a Safe Work Culture" — how does it contribute to the development of the HSE direction in the Consortium? Can we already talk about the results, citing numbers?

The introduction of the corporate Standard of the enterprise

STRATEGIC PLAN
HSE 2022–2024

"Leadership in the development of a Safe Work Culture" is aimed at creating a common value system for all employees, in which safety is a key priority along with other indicators of the business direction. The main task of implementing this standard is to form strong leaders among CPC employees and key contractors, each of which can be a support and a driving force for further development of the Safe Work Culture in the company.

During 2022, practical training and mentoring in the application of leadership practices was organized with the involvement of a contractor specializing in the development of the level of Safe Work Culture. As of the end of 2022, 624 people were trained, including 379 CPC employees and 245 contractor employees. Based on the results of independent diagnostics of the level of the CPC Safe Work Culture, confirmation of positive dynamics in the field of the formation of a unified safety value system, including among CPC contractors, was received. During the implementation of the Standard practices and other safety tools, some managers and ordinary employees of CPC managed to prove themselves as especially proactive leaders with internal motivation for the development of a Safe Work Culture. Employees note the work of managers on themselves, the desire to use new forms of constructive communication with subordinates.

It is important to note that, having transferred the leadership program from the general recommendatory phase to the regulatory phase, we have moved to active measures of influence and not only positive ones. Thus, an employee who violated the facility regime was suspended from work for a month without pay.

How important is the diffusion of HSE practices of the Consortium itself and shareholder companies? From the standpoint of your scientific activities and work experience in the structure of the organizations of the Transneft system, what useful things should be learned in this area from the leading shareholder?

A systematic approach to assigning responsible executors to processes and tasks within the framework of established corporate standards and procedures. This makes it possible to clearly delineate the execution of production tasks, which, in turn, improves the efficiency of resource use.

In 2023, in the issues of the magazine, we focus on R&D carried out in various areas of the Consortium's activities. What research and development projects are being implemented in the field of HSE?

COMPREHENSIVE DRILLS ON THE TASHLA RIVER, STAVROPOL KRAI. DECEMBER 2022

In 2022, as part of the implementation of the planned activities of the corporate Policy in the field of labor protection, industrial safety and environmental protection, the specialists of NPO Pribor GANK LLC, commissioned by CPC-R, developed a stationary post of the atmosphereic air quality control system (AQCS) in individual performance.

The stationary post is designed for operational monitoring of the state of atmospheric air, installed in the area of oil shipment at the Marine Terminal in Yuzhnaya Ozereevka (part of the Novorossiysk municipality) and in January 2023 was put into pilot operation.

The post is equipped with certified optical sensors designed to measure the content of various substances and provide indications of physical factors in the atmospheric air. Measurements are carried out in a streaming (continuous) mode on a daily basis in accordance with the measurement procedures certified at the federal level, which establish appropriate restrictions. The data is provided for inclusion into the section "Ecoinformer" on the website of the corporate magazine "CPC Panorama". The AQCS software allows you to automatically assess the compliance of the obtained measurement results with the maximum allowable concentration (MAC) standards established for atmospheric air, average data for different periods of time, and also display information in the form of tables and infographics.

Based on the results of the analysis of the measurement results, organizational and technical solutions are developed to prevent the deterioration of atmospheric air quality in the territory of residential areas adjacent to the Shore Facilities of the Marine Terminal.

In order to reduce unpleasant odors that occur when loading oil on ships, under an agreement with FGBOU VO "Vyatka State University", research work (R&D) is being carried out to study the effectiveness of the use of deodorants.

As part of this research, studies are being carried out to identify substances in oil — odor markers, to quantify the smell of oil in accordance with GOST R 58578-2019 "Rules for setting standards and controlling odor emissions into the atmosphere", and also assessing the effect of deodorants on quantitative indicators of odor and component composition provided oil samples.

There is a worldwide practice of using water curtains in oil storage facilities to prevent the spread of unpleasant odors. We are currently studying these technologies and do not exclude their use in the medium term.

Together with scientific and industrial organizations, complex scientific and experimental design studies are being carried out to develop means to reduce emissions of foul-smelling substances during oil transshipment to a tanker from a single-point mooring (SPM). As part of the work in this area, a conceptual solution has been developed for a quick-detachable filter element for capturing mercaptans (thiols) on a tanker. Since 2023, it is planned to carry out R&D "Development of an absorption neutralizing device". Such a device will allow capturing volatile organic compounds of the thiol class from oil vapors generated when oil is loaded onto a tanker.

2022 set a record for the number of scheduled and unscheduled drills at the facilities of the CPC pipeline system. Why were there so many exercises? Please give an assessment. Were the company's management and control commissions satisfied with everything? How important is such training of facility personnel, contractors and subcontractors in ensuring the requirements of industrial safety, labor protection and environmental protection?
In accordance with the requirements of Art. 5 clause 3 of the Federal Law No. 207 of July 13, 2020, by January 1, 2024, enterprises are required to revise and approve plans for the prevention and response to oil and oil products spills in accordance with paragraphs 6–8 of Article 46 of the Federal Law of January 10, 2002 No. 7 -FZ "On Environmental Protection". Conducting drills is the most important stage in the professional training of rescuers. In the course of such training, the process of mastering theoretical knowledge is carried out, practical experience is gained in the elimination of accidents, coordinated work and interaction of departments among themselves, with the headquarters of the liquidation of the accident and the municipal structures of the Russian system for protection against emergency situations (RSChS) are achieved.

At present, the CPC OSRP plans for the Astrakhan Oblast, the Republic of Kalmykia, the Stavropol and Krasnodar Krai, and the sea area in the area of responsibility of the Marine Terminal have been agreed upon and, based on the results of successfully conducted integrated drills, approved. Another check of the readiness of the forces and means of the emergency rescue team, as part of a comprehensive exercise to confirm the OSRP plan for the coastal part and the Marine Terminal Tank Farm, took place on April 27.

Your assessment of the development of means of positive and active staff motivation. What tools can be considered benchmarks today?

An effective system of motivation and responsibility in the field of HSE is one of the key processes in achieving a high level of Safe Work Culture. For several years, CPC has been using a rather effective instrument of positive motivation – a procedure of rewards for achievements in the field of labor protection, industrial safety and environmental protection. Rewarding employees for high achievements in the field of labor protection, industrial and fire safety, road safety and environmental protection is an additional motivation for their active and high-quality participation.

Due to the incentive procedure, it was possible to significantly increase interest in such an effective tool as observation cards in the field of HSE, and to achieve the involvement of personnel in participation in safety issues, including employees of contractors. According to surveys, CPC employees noted that mutual control is becoming one of the elements of the corporate culture, and for more than half of the employees, compliance with safety requirements is a top priority.

One of the most popular and effective methods of positive personnel motivation is the CPC Safety Day, which is held annually and has a wide scale of involvement of active HSE leaders.

Since 2022, committees for the development of the Safe Work Culture have been operating at all CPC facilities. These organizations set a new format for communication on security and security issues, which increases the activity and motivation of personnel at all levels. Both CPC employees and contractors are invited to participate in the committees. Issues related to the current state and further development of labor protection and industrial safety are discussed at regular meetings of the committees. Employees of all levels note the positive aspects of the committees: their benefits for the development of security, active involvement of new employees in this process.

AS OF THE END OF 2022,

624

PEOPLE,
HAVE BEEN TRAINED,
INCLUDING 379 CPC EMPLOYEES
AND 245 CONTRACTOR EMPLOYEES

Benchmarking of CPC motivation methods with other large organizations in Russia and Kazakhstan showed that our company uses advanced and effective methods*. It should be noted that within the framework of the strategic goals and objectives, work is underway to analyze the methods of motivation with the involvement of employees of various levels in order to further improve this process.

How correct is the assumption that the HSE Group has an internal policy (CPC staff) and an equally important external policy (contractors, regulatory agencies, local population)? If possible, please tell us how the foreign HSE policy was built in 2022, how do you assess the results, what are the plans for 2023.

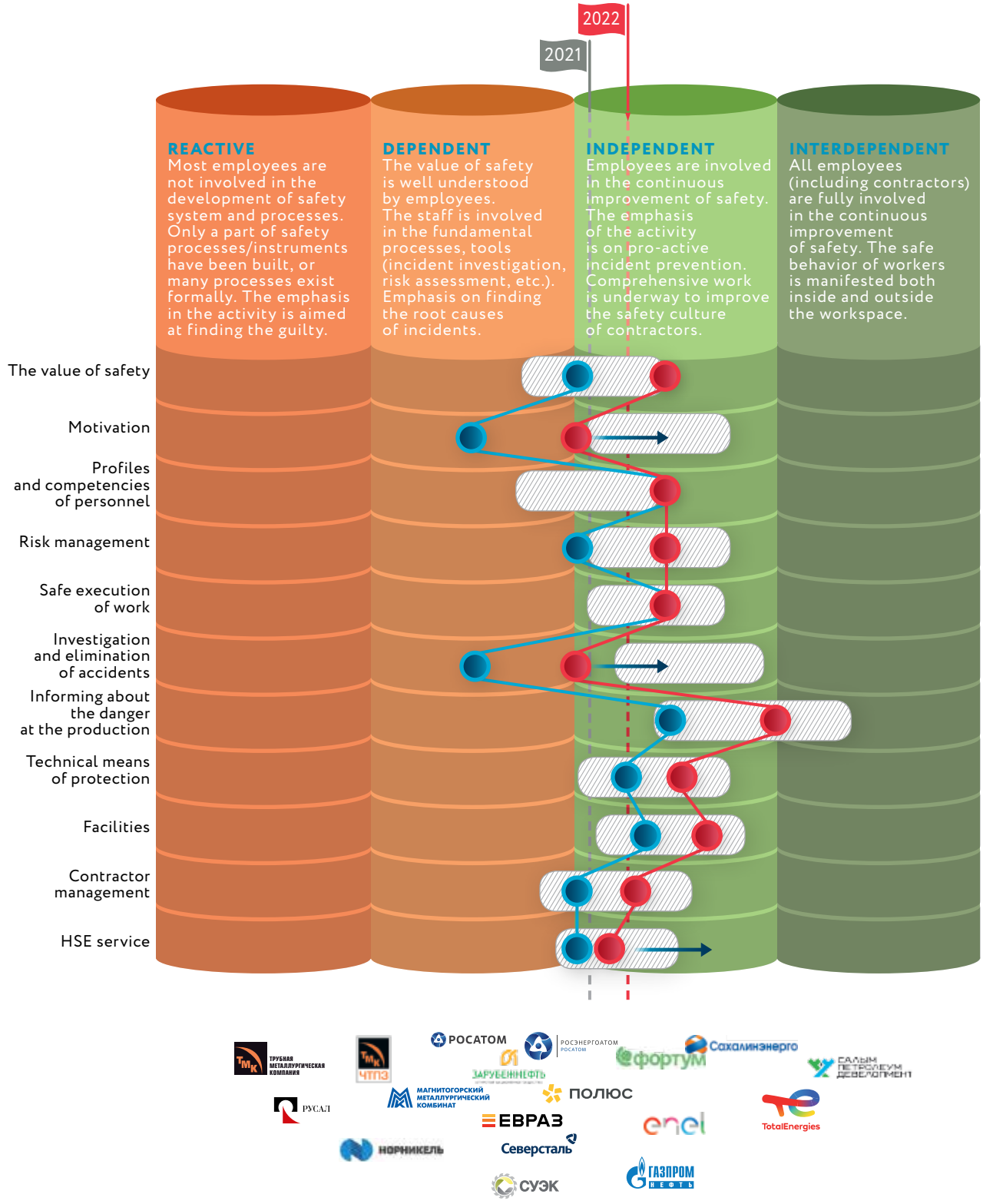
In 2022, CPC's priority areas of external cooperation in the field of HSE included the participation of company representatives in the forum of three large oil-producing joint ventures with international participation of Tengizchevroil LLP, North Caspian Operating Company N.V, Karachaganak Petroleum Operating B.V.

*According to the results of independent diagnostics

NCOC

S. A. POLOVKOV AND E. S. BULATOVA AT THE TCO, NCOC, KPO AND CPC FORUM ON JANUARY 26, 2023

DYNAMICS OF GROWTH IN THE LEVEL OF SAFE WORK CULTURE ON THE BRADLEY SCALE IN 2022



The assessment of the level of safety culture of benchmark companies was formed on the basis of data obtained both from the results of the diagnostics and from open sources.

As part of the forum, which is held regularly, topical issues of the practical application of advanced international practices aimed at preventing accidents and incidents, as well as Improving the level of Safe Work Culture. According to the joint decision of the management of these companies, in 2023 CPC will become a full-fledged participant of this forum in order to exchange best practices, openly discuss problematic issues and apply best practices in the field of HSE.

On January 26, representatives of the HSE division of CPC took part in a regular forum meeting in Atyrau. The issues of developing cooperation in the field of Safe Work Culture and prevention of accidents were considered. In particular, an agreement was reached to develop an integrated approach to ensure rapid exchange between TCO, NCOC, KPO and CPC of lessons learned from incidents. The next meeting will take place in May 2023, representatives of the HSE Group will take an active part in it.

Interaction with CPC shareholders is carried out on a regular basis within the framework of working groups and the Shareholders' Technical Advisory Committee (STAC). This platform is an important link in solving topical issues, including in the field of HSE.

In addition to this, it should be said that CPC is a member of the international HSE DAYS project. This is a community of professionals in the field of HSE, carriers of best practices. The community considers its mission to pool the knowledge and practical experience of participants in achieving the global goal of "Zero – zero fatal accidents, zero man-made accidents, zero hazardous emissions into the environment". The founders of the project are the Ministry of Labor and Social Protection of Russia, the International ORP Foundation, Suvorov Pro.

One of the most important areas of foreign policy is still interaction with the supervisory authorities in the field of HSE in Russia and Kazakhstan.

Interaction with CPC contractors is also among the priorities. It is carried out through audits and inspections, as well as regular forums, committees, meetings dedicated to HSE issues.

AN OPEN DIALOGUE IS FORMING BETWEEN CPC EMPLOYEES AND EMPLOYEES OF CONTRACTORS

How satisfied are you with the work of the Safe Work Culture Committee during the year? What did you not have time for, in what way were you ahead of expectations? Do the formed algorithms of the committee's work need to be periodically upgraded? What is the dynamics of involvement?

In general, I believe that the holding of committees for the development of the Safe Work Culture makes it possible to solve urgent problems, has a positive impact on the formation of an open and friendly atmosphere both in the teams of CPC production facilities and among employees of regional offices. This is one of the most important conditions for the further development of the Safe Work Culture at CPC.

It should be noted that the initiation of the work of the committees clearly demonstrated the existence of an internal demand among CPC employees and key contractors for such a platform for communication, where they could jointly discuss issues that relate directly or indirectly to the Safe Work Culture. Committees in all regions and facilities are held regularly. The use of a template for the analysis of observation cards, checklists and prescriptions has added consistency to their work, and now problems are solved more comprehensively.

It is important to note that representatives of contractors are permanent members of the committees, which increases their involvement in CPC information campaigns aimed at developing HSE and a Safe Work Culture. An open dialogue is being formed between CPC employees and employees of contractors when discussing and analyzing hazardous activities and working conditions at the facilities. Employees of various functional areas (mechanics, instrumentation, electricians, operational personnel) are increasingly involved in the formation of a Safe Work Culture and leadership – the process is gradual, but positive dynamics and progress can be traced. The paradigm inherent in some employees «safety is a matter and responsibility exclusively of the HSE service»*.

In 2022, there were signs of CPC moving to a new level of maturity in the field of Safe Work Culture, according to the Bradley Curve. Is it possible in this regard to ask for an analytical assessment: what place does the Consortium take in terms of Safe Work Culture in the Russian and global fuel and energy complex?

According to the results of independent diagnostics, the level of the CPC Safe Work Culture corresponds to the independent level, according to the Bradley curve. According to the benchmarking data for Russia, CPC is on the same level with such organizations as Zarubezhneft, EVRAZ, SUEK, Rosatom. Considering that CPC is actively implementing international methods and practices, I am sure that in the near future the level of maturity in the field of CPC Safe Work Culture will increase.

*According to the results of independent diagnostics

AUTHOR
DMITRY KONSTANTINOV

THE BEST DECISION

ON MARCH 21, 2023, THE RESULTS OF THE XIX NATIONAL COMPETITION "BEST CORPORATE VIDEO" (BCV) OF THE ASSOCIATION OF DIRECTORS FOR COMMUNICATIONS AND CORPORATE MEDIA OF RUSSIA (ACMR) WERE SUMMED UP IN MOSCOW. THE CASPIAN PIPELINE CONSORTIUM WAS THE WINNER IN TWO COMPETITION NOMINATIONS

Members of the BCV-2023 Expert Council agreed that a good corporate film is always more than just a beautiful story about a company. The video should unite, "cling", like and be remembered not only due to the idea embedded in it, but also due to the actual media technologies used.

To varying degrees, but with visible attention, such "heavyweights" of the national economy as OMK, Severstal, EVRAZ, Gazprom, Sberbank and others tried to implement this concept. Their vision was presented directly by the creators of video content, such local "dream factories" as Mercator, Agenda Media Group, Red Square and others. An interesting precedent was the creativity of the educational structures represented by the RANEPA. This year, 48 companies competed in the competition, submitting 191 works in 32 categories.

The CPC Press Service, which submitted its series "Joint Viewing" for the competition, won in two nominations: "Video on labor protection and industrial safety" and "Best Graphic Design Solution for a Film or TV Program", receiving the main prizes — statuettes symbolizing an integral attribute of the "most important of the arts", a clapperboard.

Entertaining and at the same time informational and propagandistic, the film was shot in the popular style of joint discussion of network videos. Video blogger, showman and professional psychologist Sergey Pisarenko, together with the animated corporate mascot "Helmet", already known to the audience since 2019, do their best for eight episodes so that the viewer does not get bored and remains "on the wave" of industrial safety for the entire hour and a half, a topic that is hardly interesting. Humor and reflection, absurdity and stand-up — as practice has shown, all these techniques are good and not excessive for the correct presentation of such complex, but necessary material on a corporate scale. As the competition showed, all the know-how offered by CPC and contractor Mercator, including graphic solutions, were well remembered by the Expert Council during the presentation of the project and were separately noted at the award ceremony.

The politician Lenin considered cinema to be the most important of the arts, the writer Borges said that there were only three plots, and the media mogul Hearst added that the positive sells worse than the negative. Contrary to the last two theses, there is no stagnation in the modern corporate video market. On the contrary, this market is updated almost daily, and even more so every year, as the ACMR competition has again convincingly proved. The deepfake series that was shown by one of the contestants (a week ahead of the world's competitors) is setting a new bar, and it's not the only supernova. The neural network "breathes in the back" of today's laureates, which means that participants and winners will have a lot of motivated work to look worthy at ACMR-2024 in a year.

SERIES "JOINT VIEWING" ON YOUTUBE

CPC PRESS SERVICE

ECOINFORMER, INSTRUCTIONS FOR USE

A NEW SECTION, ECOINFORMER, HAS APPEARED ON THE WEBSITE OF CPC PANORAMA MAGAZINE. INFORMATION ON THE STATE OF ATMOSPHERIC AIR IN THE AREA OF OPERATION OF THE MARINE TERMINAL IS REGULARLY PUBLISHED HERE

Open access to information about the environmental situation in the area of production facilities is a sign of a socially responsible company. As part of the implementation of the planned activities of the corporate Policy in the field of labor protection, industrial safety and environmental protection, in January 2023 CPC put into pilot operation the Stationary post of the atmospheric air quality control system in the area of oil shipment at the Marine Terminal.

The automatic air quality control system AQCS, developed by order of CPC at NPO "Pribor GANK", was installed at the border of the sanitary protection zone of the Shore Facilities of the Marine Terminal at the point closest to the residential area of the village of Yuzhnaya Ozereevka.

The equipment of the AQCS post includes two three-channel gas analyzers GANK-4M (included in the State Register of Measuring Instruments of the Russian Federation), a weather station, a sampling probe, a wireless communication modem, a backup power system, and device status sensors. The equipment is in a thermal, vandal-resistant box.

Certified optical sensors of gas analyzers measure the content of various chemicals in the air in a continuous mode in accordance with federally certified methods that establish appropriate limits. Chemical substances such as C1-C5 saturated hydrocarbons, C6-C10 saturated hydrocarbons, C12-C19 saturated hydrocarbons, toluene, benzene, xylene, methyl mercaptan are measured for compliance with the maximum permissible concentration (MPC) standards in the composition of atmospheric air.

In order to learn about the state of the air in the area where CPC oil is shipped to tankers and the concentration of chemical compounds in this air, just go to the Ecoinformer section on the website www.cpc-online.ru. Here are the weekly updated measurement data of the Stationary post of the atmospheric air quality control system.

First, the maximum and minimum weekly actual values of air temperature and wind speed, the prevailing wind direction are published.

The block "Changes in the concentration of chemical compounds in the air" contains measurement data of the Stationary post of the air quality control system. Turning over the pages of the block, you can see the concentrations of three types of saturated hydrocarbons (C1-C5, C6-C10 and C12-C19), toluene, benzene, xylene, methyl mercaptan.

The maximum and minimum amount of substances in the air is given in milligrams per cubic meter, based on weekly measurements. Each graphical display of data has an indicator of the maximum permissible concentration (MPC) and the user can always see whether it was exceeded or not.

Focused not only on specialists, but also on the widest possible user audience, the new section of the CPC Panorama website is intended to become a source of up-to-date and objective information about the environmental component of the Consortium's production activitie.

AUTHOR
PAVEL KRETOV

SECRETS OF PRODUCTIVITY

A STUDY OF LEADING COMPANIES SHOWED THAT THE PRODUCTIVITY OF THE BEST EMPLOYEES CAN EXCEED THE AVERAGE LEVEL BY UP TO 2.5 TIMES. HOW TO AVOID THE COMMON MISTAKES THAT PREVEND US FROM EFFECTIVELY PERFORMING OUR WORK DUTIES?

corgarashu/Shutterstock/FOTODOM

The Russian word "produktivnost" comes from the English productivity. In Misty Albion, the term arose long before the industrial revolution – in agriculture, it was distinguished by crops that give the greatest yield. With the development of production, the term productivity began to characterize the activities of both enterprises and employees. Today, speaking of human productivity, we mean the ability to successfully complete tasks in an optimal period of time.

At the same time, it is important to consider that we are all different people with an individual set of capabilities, strengths and weaknesses. If we translate the conversation into a sports plane, achieving a result in a production task most of all resembles an all-around. In this discipline, the successful overcoming of the hundred meters is not decisive for the overall

"IN A FRIENDLY, RELAXED ATMOSPHERE, PEOPLE WORK MUCH BETTER THAN THOSE WHO CONSTANTLY MARCHING"

ELENA BULATOVA,
MANAGER, LABOR
AND INDUSTRIAL SAFETY:

«I agree that we manage to perform production tasks at different times of the day in different ways. In the first half of the day I try to complete all the current and minor tasks, read the correspondence. I postpone the solution of tasks that require concentration of attention to the second half of the day – for me personally, this is the most productive time. At the same time, I try to completely eliminate distractions.

To overcome fatigue, I use short walks outside to ensure the flow of oxygen. Sometimes these are joint walks with colleagues. I used to go to the gym and yoga during my lunch break. When I get tired of sitting at the computer, I work standing up (desk adjustments allow this). When I feel tired, I change the task being performed, since the arrival of new information increases the activity of mental activity. At the end of the day, when the level of fatigue rises, I increase the short breaks of 5–10 minutes.

As a manager, I think that the productivity of subordinates will be increased not by discipline control, but by properly organized rest. I know from my own experience that a person who spends his lunch break not only on food, but also on the gym or yoga, gets a new burst of energy and, therefore, is more productive in the afternoon. Workplace stress management trainings are also a good practice. Employee stress tends to accumulate from many factors, including management pressure. Some managers believe that pressure can make employees work faster, and it will, but up to a certain point. Soon enough, the effects of stress will translate into health care costs, accident compensation, and lower productivity.

In a friendly, relaxed atmosphere, people work much better than those who constantly marching. A properly "relaxed" style of team work is possible on sites of any complexity, even if it is a spaceport. We are talking about the psychological climate: if it is healthy, any process is carried out more efficiently. Even organizing office space for relaxation can make a big difference.

Leadership and team communication also play a key role here. Managers must be able to recognize the signs of stress in their team and understand how many sources of stress move from work to home and vice versa.

Ability to do multiple things at once? I can participate in online meetings while reading correspondence, perform light tasks, while not losing concentration in relation to incoming information.

victory, it can be achieved in other ways, following your other talents and abilities.

Almost the same as for an athlete before a competition, it is important for an employee to fully recover, eat, and have a positive attitude. Each of us is able

EXPERTS ADVISE TO PLAN THE SOLUTION OF THE MOST COMPLEX TASKS FOR THE SAME TIME OF THE WORKING DAY

IGOR BIRYUKOV,
LEAD SPECIALIST, GIS AND CADD:

«When working in open space, it is important to pay special attention to noise hygiene. Phone signals, audio messages, and video clips have a negative impact on productivity. It seems to me that a phone set to vibrate during business hours is a sign of good manners. Very rarely, when I'm afraid to miss an important call for me, I put my smartphone in normal mode.

In connection with all this, the most productive time for me begins at the end of the working day, when some of the employees leave at 17:00 and relative silence sets in. Often there is a temptation to extend this period, remaining even after the official end of work, but this must be fought. The second most productive time slot is from 9:00 to 10:30, sometimes until 11:00. When I read all the mail, exchanged news with colleagues, drank a cup of morning tea — the body spends the accumulated energy reserve surprisingly generously!

My productivity is thrown off my pace by unexpected emails that don't always concern me directly. Or phone calls, when colleagues, instead of answering sent letters, prefer to talk, choosing for this a time that is convenient for themselves, but not always for the interlocutor. E-mail is the greatest invention, I always prefer it to other forms of communication. Of course, there are times when a phone call is necessary. For quick decision-making, to clarify the nuances that are not transmitted by letter, relationships such as "boss-subordinate" can also be included here.

Those who like to talk on the phone for a long time in open space or those who listen to conference calls without headphones are also a serious hindrance to productivity.

I struggle with fatigue by changing the type of activity, a five-minute conversation with colleagues, a walk (in good weather) at lunchtime. Drowsiness is overcome by physical activity — you need to get up and walk around the office. Coffee doesn't help.

As a manager, I would try not to abuse the holding of sudden conference calls. It's one thing to have a planned Skype meeting for which you prepare, finish all urgent matters, letters, calls, print out and work through materials for the meeting, warn colleagues that you won't be able to go to lunch together today, and finally pour coffee or a glass of water — and you ready!

Sometimes teamwork can be fun, especially in a rush mode. An inexplicable drive appears, energy recharge, you do not feel either hunger or fatigue. Periodically, such shake-ups are very necessary, especially if the goal is achieved and you hear kind words from colleagues and management.

If we talk about multitasking, then this is an amazing ability that is given to few. A kind of talent which, as a rule, people who have become leaders possess. In fact, actions are performed linearly, sequentially, or switching occurs — at different frequencies. I often do multiple tasks at the same time. Sometimes this is dangerous because it comes down to banal procrastination: you perform various small tasks with increased productivity, respond to unexpected requests from colleagues, respond to various information requests, even in a more expanded form than expected of you, just to avoid doing some work that is important and has a high priority, deadline or, conversely, endless in terms of time and tedious in nature.

to listen to ourselves and adapt accordingly to achieve maximum performance, avoiding inappropriate relaxation or, conversely, excessive "pumping".

Another important point that you can "spy" on athletes: any competition is, first of all, a competition with oneself. In other words, keeping track of our personal bests is just as important as beating our opponents. It is they who set the right guidelines and allow you to be better in something today than yesterday. Fellow leaders who set an example in any production activity can be the same motivators. Let's remember: if the strongest athlete competes in the race, then the results on the scoreboard become noticeably higher for all its participants.

EXHAUSTABLE RESOURCES

This advice will not be unexpected: when solving a task that requires maximum productivity, it is necessary to completely eliminate distractions. A person has a limited amount of attention, which we can distribute to various actions. And there is no way to exceed it. Impossible to mentally multiply two-digit numbers and change lanes in heavy traffic.

"However, you can do several things at once, if they are easy and do not require too much attention", writes Daniel Kahneman in his book Thinking, Fast and Slow. "You can probably talk to someone sitting next to you if you are driving a car on an empty highway, and many parents find – albeit with some embarrassment – that they can read a fairy tale to a child while thinking about something else".

The same exhaustible resource as attention is the will. If you overpower yourself to complete one task, you may simply not have enough mental strength for the next. from the Case Western Reserve Private Research University proved this by conducting several experiments.

In one test, participants were asked to write a text that contradicted their personal beliefs. Moreover, some were given the opportunity to choose – to write or not to write, others – not. As a result, those who independently made the difficult decision to write the text coped worst of all. Even the participants who received the task in a categorical order did better. Based on these data, the researchers concluded that task performance is reduced not simply by performing an unwanted action, but by making a conscious volitional decision. Therefore, when a manager is about to entrust someone with a laborious task that requires gathering all the will into a fist, he should think about whether the subordinate will soon need this resource to solve a more important task.

NOTES IN THE ORGANIZER

A list of important tasks helps us not to be distracted from priority tasks. Keep an organizer and stickers with you at all times. In them, you can write down important points of the work task that cannot be forgotten.

Experts advise to plan the solution of the most complex tasks for the same time of the working day, which, according to our experience, we consider the most productive. This is how we create a habit and increase our effectiveness even more. Here it is worth considering that our body works around the clock within a certain cycle, which is determined by the change of light and dark hours of the day. This cycle, which also affects sleep patterns, changes from one 90-minute phase to another. That is, our brain can focus for every hour and a half, but then it needs a break. That is why it is worth dividing working time into several phases so that in between them you can take a short break to rest, warm up or go out.

SELF-MANAGEMENT OF WORKING HOURS HELPS TO INCREASE PRODUCTIVITY BY AN AVERAGE OF 27%

According to studies, self-management of working hours helps to increase productivity by an average of 27%. In addition, there are many techniques that allow you to optimize your time. For example, in order not to check mail every five minutes in anticipation of an important letter, you can set the sound signal for notifications of receipt of letters.

Many large companies have adopted a policy of "clean desks" – an employee should have only those documents that he is working with at the moment. It may seem to some that the main goal here is to maintain confidentiality. As Captain Gleb Zheglov taught the future Interior Ministry General Volodya Sharapov in the series "The meeting place cannot be changed": "Another criminal will give half his life for a piece of paper on your or my desk." However, it's not just that. Excess unnecessary items on the table leads to a decrease in productivity. Our brain is distracted by unnecessary things, which prevents us from performing necessary tasks.

AUTHOR
DMITRY KONSTANTINOV

PROJECT OF NATIONAL IMPORTANCE

IN EARLY APRIL, TENGIZCHEVROIL LLP CELEBRATED ITS 30TH ANNIVERSARY. THE OPERATOR OF THE TENGIZ FIELD AND THE MAIN SUPPLIER OF CRUDE OIL TO THE CPC PIPELINE SYSTEM CELEBRATES THE ANNIVERSARY WITH A 29-FOLD INCREASE IN OIL PRODUCTION COMPARED TO 1993 AND LAST YEAR'S SUPPLY TO THE TERMINAL IN NOVOROSSIYSK – 29 MILLION TONS

The main tasks assigned to the joint Kazakh-American enterprise created in 1993 included ensuring safe and uninterrupted oil production, timely payments to the budget of Kazakhstan and ensuring the safety of workers.

"We are glad to see that for 30 years TCO has been fulfilling its obligations", said Minister of Energy of the Republic of Kazakhstan Almasadam Satkaliyev, congratulating its employees on the anniversary of the company on April 7 in the Shanyrak shift settlement.

Together with the head of the national energy department, representatives of TCO shareholder companies came to congratulate the workforce: Chevron Corporation (50% stake), NC KazMunayGas JSC (20%), ExxonMobil Kazakhstan Ventures Inc. (25%) and LUKOIL PJSC (5%).

"Over the 30 years of its presence in Kazakhstan, Tengizchevroil has stimulated the country's economic growth and supported it in becoming an important global energy producer", said Kevin Lyon, TCO General Director. "However, this success would not have been possible without the continued support of our four shareholders, the Government of Kazakhstan, our skilled and dedicated employees, and the people of the region in which we operate."

Over three decades, TCO has made direct financial payments to the Republic of Kazakhstan in the amount of more than $176 billion, including more than $43 billion directed to local goods, works and services. If we talk about the safety of production, then since 2000 the intensity of emissions into the environment has been reduced by 75% with a manifold increase in industrial volumes.

Construction of the Future Growth Project and Wellhead Pressure Management Project (FGP-WPMP) is largely completed. This project of national importance will help to create a legacy of trained talent, new facilities, technology transfer through partnerships between Kazakhstani and international companies, and upgraded infrastructure in the region.

"We are proud that over the past 30 years TCO has created hundreds of thousands of jobs for the citizens of Kazakhstan and used local goods and services, which stimulated economic

TCO

activity not only in the Atyrau region, but also in all regions of the country", says Konilkosh Suesinov, TCO Deputy General Director.

In 2023, Tengizchevroil reached the highest level of local content in the last six years - more than 70%. Currently, citizens of Kazakhstan occupy 95% of positions in the main production of TCO. In addition, since the company was founded, over $360 million has been invested in more than 100 infrastructure projects aimed at building and improving schools, hospitals, kindergartens and other social facilities in the Atyrau region. TCO has also supported more than 120 projects under the social investment program aimed at improving the well-being of the population in the areas of health, education and economic development.

There are only a few fields in the world with reservoirs similar to Tengiz, where high pressure gas injection is used as a method of oil recovery. TCO's high-tech reservoir modeling capabilities enable more accurate field characterization, production optimization and maximum oil recovery.

"Tengiz continues to be a jewel in the crown of Chevron's global portfolio, and it is my great pleasure to be here today to celebrate this momentous occasion with all of you. As we look to the future, Chevron and its partners remain committed to providing whatever support is necessary to safely complete the Future Growth Project and integrate it into the base business," said Derek Magness, Managing Director of Chevron Eurasian Business Unit.

The enthusiasm, hard work and dedication of thousands of TCO employees is the company's main asset. Having celebrated the 30th anniversary of successful work, Tengizchevroil will continue to make a significant contribution to the development of the oil and gas industry of Kazakhstan and the national economy as a whole.

1993 — On April 6, an Agreement was signed in Almaty on the establishment of a joint Kazakh-American enterprise Tengizchevroil to develop the Tengiz field discovered in 1979.

1997 — The first major modernization of the oil complex at Tengiz was completed, which made it possible to increase the annual production level to 7 million tons.

1998 — The five-year program "Atyrau Bonus Fund" was implemented. The volume of social investments (gasification, medicine and other areas) amounted to $50 million.

1999 — Launch of the program of social infrastructure projects "Igilik" ("Benefit"). $4 million allocated for the reconstruction of the bridge across the Urals and the improvement of the regional center.

2001 — The Fifth Thread and Program-12 projects were completed. The volume of annual production has been increased to 12 million tons. The CPC oil pipeline was put into operation to deliver Tengiz oil to the Black Sea marine terminal.

2003 — The implementation of the largest project in the history of the oil and gas industry of Kazakhstan to increase the capacity of the oil complex, worth $7 billion, began. Construction of a Second Generation Plant and a Sour Gas Injection complex (SGP/SGI).

2006 — The annual budget of the "Igilik" program amounted to $12 million.

2008 — July 5, the SGP/SGI complex was put into operation.

2009 — Oil production at Tengiz increased to 25 million tons.

2011 — TCO wins the Grand Prix of the "Paryz" republican contest of business social responsibility.

2012 — 2 billion barrels of oil have been produced at Tengiz since the start of TCO. $150 million invested in charitable projects in the Atyrau region.

2013 — The annual budget of the "Igilik" program amounted to $25 million.

2015 — TCO completely eliminates sulfur reserves at the Tengiz field.

2016 — Final decision was made on financing the Future Growth Project and Wellhead Pressure Management Project (FGP-WPMP).

2017 — 3 billion barrels of oil have been produced at Tengiz since the start of TCO.

2019 — About 90 thousand citizens of the Republic of Kazakhstan were involved at the peak of the FGP-WPMP construction. The program of training and retraining in working specialties for residents of Atyrau and Mangistau regions was launched.

2020 — The last FGP-WPMP module is delivered to Tengiz for further assembly.

2021 — 500 million tons of oil (4 billion barrels) have been produced at Tengiz since the start of TCO operation. The company allocates 7.7 billion tenge to support the Atyrau region in the fight against the COVID-19 pandemic. Independent international company Ranstard Employer Brand Recearch recognized TCO as the best employer of 2020 in Kazakhstan.

2022 — The Integrated Operations Control Center (IOCC) was put into operation at Tengiz.

2023 — On April 6, TCO introduces the new Kazakhstani Content Development Program (KC). A key aspect of TCO's strategy to develop local content is working with current and potential suppliers, which helps the company meet the needs of production, obtaining world-class works, goods and services at a competitive price.

AUTHOR
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WITH A CAPITAL NUMBER

ON APRIL 13 THE HEAD OF THE INFORMATION TECHNOLOGY SERVICE ILYA SERGEEVICH STARKOV CELEBRATED HIS 50TH ANNIVERSARY. ACCORDING TO THE HERO OF THE DAY, THE BEST GIFT FROM THE EDITORS IS IF THEY FINALLY RESPONSES SOMEWHERE TERABYTES OF PHOTOS AND VIDEOS, HEAVY LOADED ON A CORPORATE SERVER

Ilya Starkov was born in the oil capital of Western Siberia, the city of Khanty-Mansiysk. To those who imagined the trailers of a working settlement on the banks of the Irtysh, he will reasonably object that then, in 1973, there were already brick houses with steam heating, in which televisions broadcast "Seventeen Moments of Spring". And now Khanty-Mansiysk is known for world-class ski runs and one of the best oil and gas museums.

The hero of the day spent his youth in Rostov-on-Don, where in 1995 Ilya Starkov graduated from Rostov State University (since 2006 – Southern Federal University) with a degree in radiophysics and electronics with a specialization in microprocessor technology. He received an MBA degree in Information Management from the Russian Academy of National Economy and Public Administration under the President of the Russian Federation (RANEPA).

At the beginning of the creation of the CPC pipeline system, Ilya Starkov worked for Fluor Daniel, which was the general contractor of Consortium for the construction management. He joined this company on July 19, 1999. After the completion of the main construction phase, on August 1, 2001, he moved to work at CPC.

"We came to CPC as a well-formed team", recalls Ilya Sergeevich. "By that time, we already knew each other well, we had common principles and an understanding of how we should build our work. We came to the open field and immediately got down to business".

The case turned out to be large-scale: building the information infrastructure of a large company with all its components. Servers, personal computers at workplaces, backup, communications and much more, without which neither people nor the oil pipeline itself can work, for example, a SCADA control system or a MAXIMO procurement system.

"If we compare the CPC pipeline system with the city, we have improved the streets in it and now we are making sure that it is convenient and comfortable to move along them", Ilya Sergeevich believes.

From 2006 to 2016, Ilya Starkov was an employee of Chevron Corporation seconded to CPC. On November 1, 2016, he again joined the staff of the Consortium as the head of the IT group, which by that time had reached the "civil majority" of the permanent membership.

In March 2020, due to the threat of mass coronavirus infection, 80% of CPC employees switched to remote work. Almost everyone, from

mxsbmbrg/Shutterstock/FOTODOM

senior managers to PS shift workers, agrees: without the qualified support of the IT group, it would be problematic to transfer all the functionality to the house.

"In advance of the quarantine, we tested a software product that provides secure remote access to internal corporate resources", Ilya Sergeevich said in the September 2020 issue of CPC Panorama. "The scheme we applied maintained a sufficient level of information security, and in this regard, we avoided the problems that other organizations faced when switching to remote access".

Among the population of 2,000 of the "CPC city", the editorial board of the magazine always gets in the way of busy people, asks questions, draws beautiful, but a lot of "weighty" pictures. I remember well how, in the cold summer of 2021, we set up an online broadcast of a press conference from the Marine Terminal by phone from Moscow. It was the first time this was done, something went wrong, but the head of the IT group, who was nearby, quickly came to our aid and picked up the phone.

This is what he is all about – with his strategic leadership role, Ilya Starkov never distances himself from details, rightly believing that there are no trifles in work. And if they are not taken into account to the number of characters in the password, then objects of critical importance for the national energy industry are opened by hackers and paralyze the national economy.

CPC INFORMATION TECHNOLOGY GROUP, 2014

"THE MAIN DIRECTION AND CHALLENGE FOR US NOW IS IMPORT SUBSTITUTION. IT WILL REMAIN THE MAIN ONE FOR A COUPLE OF YEARS"

"The main direction and challenge for us now is import substitution", Ilya Sergeevich explains the current tasks of the IT group. "We have been doing this for a year, and for a couple of years this direction will remain the main one".

The creation of the Security Coordinating Committee in the Consortium in 2022 was caused by a sharp increase in the number of hacker attacks on the corporate information structure. The IT group successfully keeps the defense at the forefront. And what about the "rear", is there enough time for hobbies?

"I am generally a very enthusiastic person", – Ilya Starkov admits. "It is interesting to try something new: I skydives, paraglided, there was a period when I spent almost every weekend at the sea, scuba diving on flooded objects near Novorossiysk. In I even played tennis for three years on weekends. In general, I have a lot of hobbies, only there is not enough time for everythings".

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DISPATCHER'S DAY

IN FEBRUARY, IGOR ALEKSANDROVICH LYCHAGIN, SENIOR TANKER LOADING DISPATCHER, CELEBRATED HIS 60TH ANNIVERSARY. THE INITIAL STAGE OF HIS BIOGRAPHY, USING MARINE TERMINOLOGY, HE CHARACTERIZES THE PERIODIC CHANGE OF TACK

Igor Lychagin was born on February 21, 1963 in the city of Tikhoretsk. In 1980 he entered the energy and physics faculty of the Moscow Power Engineering Institute. Upon graduation, he was drafted into the ranks of the Armed Forces of the USSR, where he served as an officer as an aircraft technician in an air defense combat aviation regiment.

"Cardinal transformations in society at the turn of the 1990s did not fail to affect the fate of our generation, which was entering an active life phase", Igor Alexandrovich notes. "Over the next few years after demobilization, fate prepared a path for me from a Komsomol organizer to an entrepreneur".

In 1990–1091, Igor worked on central television at the ViD company and at the same time studied at the Faculty of Journalism of the Youth Institute (now Moscow University of the Humanities). Then, on the basis of the same university, he received an MBA degree.

"In 1995, fate, having turned 180 degrees again, brought me back to my roots, to my hometown", recalls Igor Lychagin. "Here I became a part of the team of Caspian-Caucasian main oil pipelines JSC (PKMN JSC), which shortly before that was created on the basis of the Tikhoretsky Regional Oil Pipeline Administration, as well as the facilities of the Georgievsk ROPA, the Grozny ROPA of the North Caucasian Main Oil Pipelines Administration and the facilities of the Astrakhan ROPA South Department of Main Oil Pipelines of Glavtransneft".

In 1997 PKMN JSC was reorganized into the Tikhoretsk Regional Directorate of Main Oil Pipelines (TRDMOP) as part of Chernomortransneft JSC. The development and formation of TRDMOP proceeded at an accelerated pace. In 1997, the main oil pipelines Grozny-Baku and Voznesenskaya-Grozny-2, which were put out of action in 1994 due to military operations in the Chechen Republic, were restored. Through the system of main oil pipelines Baku-Grozny-Tikhoretsk, the pumping of Azerbaijani oil to the Tikhoretskaya oil pumping station and further to Novorossiysk and Tuapse began. But due to the large loss caused by unauthorized tie-ins into the oil pipeline on the territory of the Chechen Republic, it was decided to build a 312-kilometer bypass section through the territory of Dagestan and the Stavropol Krai.

"In 1997–1998, I took part in the construction of the Samur and Sulak PS", says Igor Alexandrovich. "After putting the new section into operation, I began to work as a dispatcher on the Grozny-Baku oil pipeline".

OCC IN NOVOROSSIYSK , APRIL 2011

Since 2000, Igor Lychagin has been working for the Caspian Pipeline Consortium. Having passed the competitive selection and testing, he, as part of a group of dispatchers, was sent for training and probation to the main control center of the Chevron Corporation, and then to the marine terminal in Oman, similar to the one built in Yuzhnaya Ozereevka.

FOR MORE THAN 20 YEARS OF OPERATION, WE HAVE SHIPPED ALMOST

8

THOUSAND TANKERS

"I consider the loading of the first tanker Minerva Alexandra at the CPC marine terminal in October 2001 to be one of the most memorable moments of my career", says Igor Aleksandrovich. "It was very interesting and certainly exciting, as if opening up new horizons of something unknown, alluring and bewitching at the same time".

At that time, there were no simulators that would allow us to work out the loading technology in advance. Therefore, I had to comprehend everything "manually", relying on my personal experience and professional intuition. The presence of the entire CPC management in the Operation Control Center attached special responsibility to the event.

Today, all OCC dispatchers — those who work on loading tankers, and their colleagues in the linear part — work as a single well-oiled mechanism aimed at trouble-free and safe operation of the facilities of the main pipeline and the Marine Terminal, in strict accordance with the schedules for pumping and offloading oil. Everyone is well aware of the cost of unauthorized downtime of tankers and emergency situations on land and at sea. Therefore, the dispatcher has no right to make a mistake.

"For more than 20 years of operation, we have shipped almost eight thousand tankers", emphasizes Igor Lychagin. "All this became possible thanks to the close-knit team of the dispatching service, which absorbed the experience of professionals gathered at one time from all departments. Mostly these were organizations of the Transneft structure: from the Caucasus to Siberia, from the Baltic to the Amur".

It should be noted that such coherence and mutual understanding became possible not least thanks to the friendly relations that have developed in the team. Dispatchers who are not on duty often go out into nature with a full family

CALGARY, THE COMPANY TELVENT TRAINING, APRIL 2012

THE UNOFFICIAL BIRTHDAY OF THE CPC DISPATCHER'S SERVICE, CELEBRATED AT THE BEGINNING OF SUMMER, HAS BECOME A GOOD TRADITION

DISPATCHER'S DAY, JUNE 2013

composition. Since the distant 2001 and up to the covid restrictions of the recent past, the unofficial birthday of the CPC Dispatcher's Service, celebrated at the beginning of summer, has become a good tradition.

"Although the work of a loading dispatcher may seem to be largely routine, monotonous, repeating from day to day, from shift to shift, but even here creativity and initiative are required", Igor Lychagin is sure. "In the conditions of constant improvement of the CPC pipeline system and, as a result, the introduction of new SCADA control systems, you get real creative satisfaction from the development of new screen forms and applications, which are then implemented and used in our daily work".

The work of the loading dispatcher increases year by year. If at the dawn of the terminal's operation, on average, about ten tankers were shipped per month, but today more than fifty of them are processed for the same period. The specificity of loading schedules leads to the fact that the greatest intensity of the dispatcher's work falls precisely at night, when physiologically a person is most vulnerable and less able to work. This obliges to great concentration in work and imposes a serious responsibility in decision-making. In the future, after the implementation of DBNP, the intensification of the dispatcher's work will only grow. How can one not recall the lines from Nikolai Tikhonov: "Nails should be made of these people!".

This year marks 22 years since the start of operation of the CPC Marine Terminal. The company is growing, the team is growing, the city of Novorossiysk is growing before our eyes.

"At the beginning of the century, it did not look as presentable and flourishing as it is now", recalls Igor Aleksandrovich. "The first impression was spoiled by fairly broken roads, a collapsing embankment,

THE FIRST TANKER

and the lack of new buildings. One of the first new buildings was the residential complex Victoria in the 14th microdistrict. Jokingly, this complex was nicknamed the "CPC hostel" due to the fact that many employees of the Marine Terminal settled there.

Once the 14th microdistrict was considered the outskirts, but now it is the core of the new Novorossiysk, uniting the 15th, 16th, 17th microdistricts, as well as numerous new modern residential complexes. A little more – and the coastal settlement of Myskhako will become part of this agglomeration.

The new embankment with the adjacent reconstructed park named after Frunze became a special pride of the city residents. A futuristic promenade leads from the yacht marina to the Sea Station and further to the Maritime Cultural Center, the Hilton Garden hotel and the Novo City residential complex. There are so many interesting things around that you won't notice how you walked four kilometers.

"So imperceptibly, year after year, in business, in work, in the bustle, time passes, life passes", says Igor Lychagin. "Boulevards are blooming, houses are being built, children are growing up and leaving. And if the older ones are already quite mature and independent family people, then the younger one is like the first notch at a new turn of fate. He is almost the same age as the CPC Marine Terminal, this year he will be 21 years old. Already a third-year student of Gubkin Russian State University of Oil and Gas, confidently following in the footsteps of his father".

HOUSTON, SHEVRON CORPORATE TRAINING, 2013

AUTHOR
PAVEL KRETOV

"EVERY TIMELY DIAGNOSIS..."

FRUITFUL COOPERATION BETWEEN THE HEALTHCARE INSTITUTIONS OF THE STAVROPOL KRAI AND CPC HAS BEEN DEVELOPING FOR MORE THAN A DOZEN YEARS. THE RESULTS OF THE CHARITY PROGRAMS OF THE CONSORTIUM ARE IMPLEMENTED IN CONSTRUCTED AND RENOVATED BUILDINGS OF HOSPITALS AND POLYCLINICS, MODERN EQUIPMENT, AN UPDATED PARK OF AMBULANCE CARS

The working day of the Minister of Health of the Stavropol Krai, Vladimir Kolesnikov, is scheduled literally every minute, but he found time to meet with correspondents of CPC Panorama.

"The fight against the pandemic was not easy, but by consolidating all the forces and means, restructuring and reformatting the work of medical organizations, we were able to maintain the stability of the regional healthcare system", the minister says. "During this period, funding for the re-equipment of medical institutions in the Stavropol region reached 10 billion rubles per year. And of course, the interaction with the Caspian Pipeline Consortium was especially important for us".

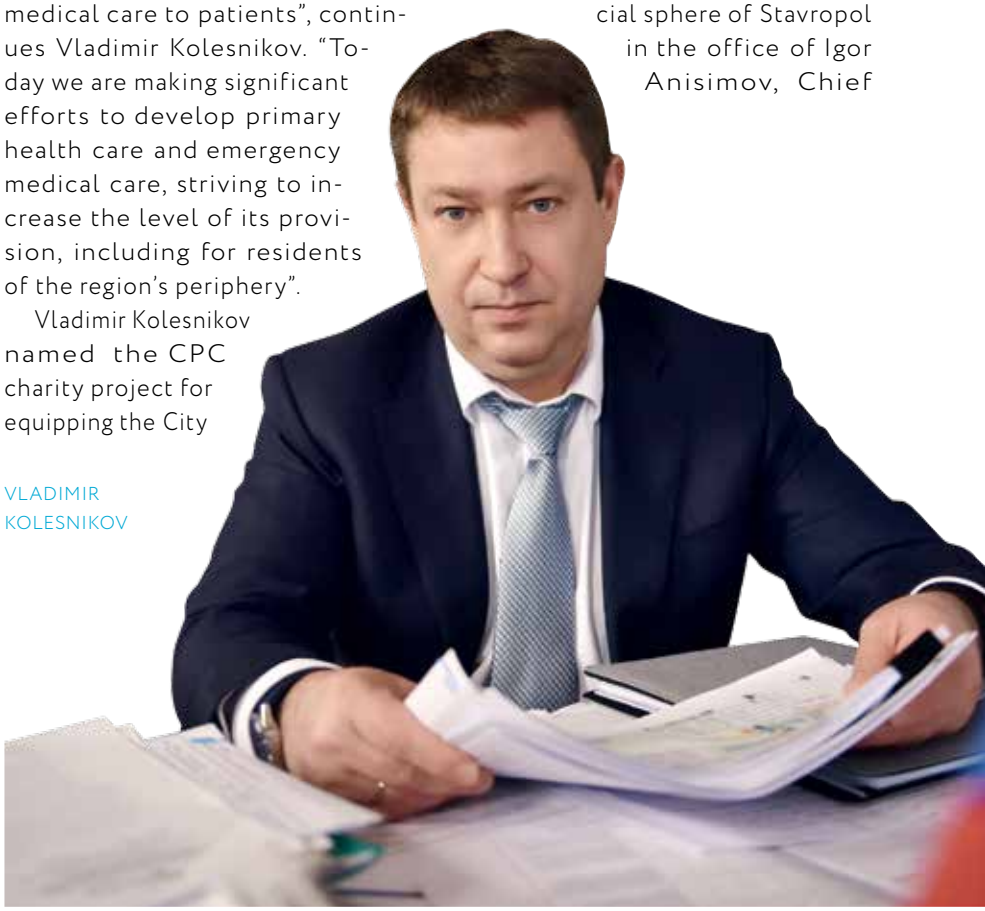
In 2020 CPC promptly purchased ventilators intended for use in intensive care and resuscitation departments during adults and children artificial lung ventilation. Regional hospitals received bedside resuscitator monitors and portable anesthesiologist monitors, pulse oximeters, anesthesia depth monitors and other equipment, which are urgently needed in the treatment of coronavirus infection.

Vladimir Kolesnikov had a significant experience of interaction with the CPC when he was in charge of the regional cardiological dispensary. In particular, in 2019, for this institution, the Consortium purchased expert-class equipment for ultrasound examination of the heart with dopplerometry, an electrophysiological laboratory for detecting complex cardiac arrhythmias, laboratory equipment for determining the pathological state of the blood coagulation system and other equipment, as well as a bus for transporting patients and medical staff. The new technology has significantly accelerated the work, improved the quality of medical care, made it possible to make more accurate diagnoses, which means saving the lives of many patients.

"It is gratifying that the interaction between CPC and the regional administration covers not only the areas through which the Consortium's oil pipeline is laid, but also regional healthcare institutions, organizations specializing in providing emergency and urgent medical care to patients", continues Vladimir Kolesnikov. "Today we are making significant efforts to develop primary health care and emergency medical care, striving to increase the level of its provision, including for residents of the region's periphery".

Vladimir Kolesnikov named the CPC charity project for equipping the City Clinical Emergency Hospital as an example of such an area of cooperation between the company and the region. For this Stavropol medical facility, a modern X-ray machine was purchased in 2021. We continued the conversation about CPC's interaction with the social sphere of Stavropol in the office of Igor Anisimov, Chief

VLADIMIR KOLESNIKOV

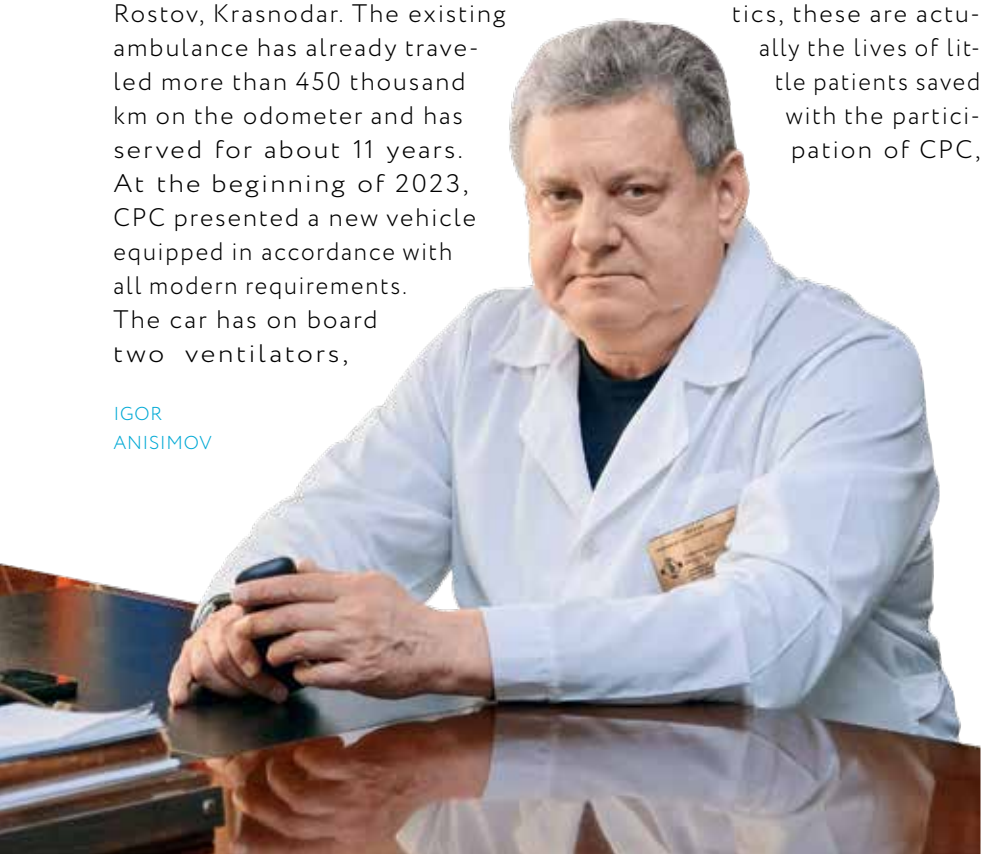


Physician of the Regional Children's Clinical Hospital.

"In our region, they take medicine seriously and have brought it to a good level", the head physician states. "Therefore, from my point of view, we need not so much large infusions as permanent ones: we need to replace equipment that fails, advanced diagnostic and treatment methods are being introduced. Sometimes there is a need for unforeseen acquisitions that are too large for us to pay for them at our own expense, and at the same time they were not taken into account in the already drawn up budget of the region".

In 2017–2018, the Consortium purchased five class B ambulances for the hospital to transport patients for research and medical consultations to other medical organizations in the city. How much this transport is in demand is best illustrated by the following figure: each car travels a distance equal to the Earth's equator in a year.

An acute problem for Stavropol pediatricians has recently been the transportation of children to receive high-tech medical care in Moscow, St. Petersburg, Rostov, Krasnodar. The existing ambulance has already traveled more than 450 thousand km on the odometer and has served for about 11 years. At the beginning of 2023, CPC presented a new vehicle equipped in accordance with all modern requirements. The car has on board two ventilators, a defibrillator, a monitor, an electric aspirator, a neonatal heater, stretchers of various modifications. The vehicle is designed to transport all intensive care patients, including those with burns and other types of injuries.



IGOR ANISIMOV

DURING THE FOUR YEARS OF USING THE MULTIFILTRATE DEVICE, 118 SESSIONS OF EMERGENCY HEMODIALYSIS WERE PERFORMED, THE PROCEDURE WAS PERFORMED ON

38

CHILDREN

"In 2019, our hospital climbed several steps up in the field of urology after the acquisition by the consortium of the MultiFiltrate device for extracorporeal detoxification with the possibility of performing hemodialysis procedures", continues Igor Anisimov. "Previously, newborns with kidney anomalies had to be transported to other regions, and not everyone was able to be transported safely".

During the four years of using the MultiFiltrate device, 118 sessions of emergency hemodialysis were performed, the procedure was performed on 38 children. And these are not just statistics, these are actually the lives of little patients saved with the participation of CPC, who received renal replacement therapy on time.

The Consortium provided significant assistance to the regional children's hospital in the field of magnetic resonance imaging. With young patients, this procedure requires general anesthesia – CPC has purchased equipment for anesthesia and monitoring. And to increase the efficiency of research – an automatic diffusion station for the introduction of a contrast agent.

"Today, we can ensure maximum safety for our patients, both during the administration of a contrast agent and during general anesthesia, thanks to continuous video monitoring. The main thing is that now we can limit their transportation outside the medical facility. The entire staff of the Regional Children's Hospital expresses its deep gratitude to CPC for its significant contribution to the provision of medical care to children", summarizes Igor Anisimov.

And we get into the car and drive to the city of Izobilnoe. In 2019, CPC built a modern two-story building with a total area of 1.5 thousand m^2 for a children's polyclinic. It freely accommodates departments of pediatrics, specialized medical care, rehabilitation treatment, functional and radiation diagnostics, as well as a laboratory, offices of a neurologist, otolaryngologist, orthopedist, surgeon, oculist, psychiatrist, ultrasound diagnostics and others.

"The building was built in 10 months, and we have been waiting for its opening for several decades", says the head of the polyclinic, Lyudmila Gamayunova. "The former clinic was located in the

building of a former kindergarten, imagine for yourself how crowded and uncomfortable it was".

The new polyclinic serves not only the city, but the entire district — almost 17,000 children receive round-the-clock pediatric care. Before the housewarming, the polyclinic could receive up to 200 patients per shift. Now this figure has increased to 500, and taking into account the fact that the institution operates in two shifts, the daily throughput is 1000 people.

"The new building helped us to pass the pandemic period more confidently", continues the head of the clinic. "Isolated boxes made it possible to separate patient flows. Equally important was the presence of two floors. Patients came to the first, specialists took to the second".

LUDMILA GAMAYUNOVA

THE DAILY THROUGHPUT OF THE NEW POLYCLINIC IS

1000

PEOPLE

The diagnostic equipment donated to the polyclinic makes it possible to detect dangerous, including rare, diseases at an early stage.

"It happened that oncology was also detected and such a disease as portal hypertension", explains Lyudmila Gamayunova. "The latter disease does not manifest itself in any way until it reaches the stage of life-threatening bleeding. Each such timely diagnosis can not only save someone's life, but is also of great importance for the future development of the child and his health".

FROM THE TRENCH TO THE MUSEUM

OVER 600 ANCIENT ARTIFACTS WERE FOUND DURING THE DESIGN, CONSTRUCTION AND EXPANSION OF THE CPC PIPELINE SYSTEM IN 1997–2012. ANCIENT, SCYTHIAN, SARMATIAN AND OTHER CULTURES HAVE BECOME CLOSER AND MORE UNDERSTANDABLE TO MODERN RESEARCHERS THANKS TO ARCHAEOLOGICAL EXCAVATIONS ALONG THE PATH OF THE 1511-KILOMETER PIPELINE

Vinogradny-1

In 2012, during the construction of PS-8 (Expansion Project), traces of an Iron Age settlement and a later burial were discovered nearby. As a result of archaeological excavations, iron weapons, bronze mirrors, bronze, agate and carnelian jewelry, ceramic and glass utensils, and ceramic spindles were found. The age of the finds dates back to the V-II centuries BC.

Novovelichkovsky kurgan

Burial of the Sarmatian era (II century BC – II century). Bronze tools, gold jewelry, bronze and iron weapons, ceramic dishes, coins. Excavations were carried out in 2011 during the construction of new PS under the Expansion Project.

Vladimirsky kurgan

Burial of the Sarmatian era (II century BC – II century). Bronze tools, gold jewelry, bronze and iron weapons, ceramic dishes, coins.

Temizhbeksky kurgan

Burial of the Sarmatian era (II century BC – II century). Bronze tools, gold jewelry, bronze and iron weapons, ceramic dishes, coins.

Ipatovsky kurgan

The most significant archaeological find of the XX century in the area of the Scythian culture at the stage of its "diffusion" with the Sarmatian. In 1998, in the Stavropol Territory, in a burial on the banks of the Kalaus River, dated to the III century BC, gold jewelry, iron weapons and antique ceramics were found. Anthropologists using the method of M.M. Gerasimov, recreated a sculptural portrait of a young woman buried here, called the "Ipatovskaya Princess".

Sharakhalsun Kurgan

Scythian burial of the III–II centuries BC in the Stavropol Territory. Ceramic dishes, bone ornaments, iron weapons.

Yekaterinovsky kurgan

Burial of the Sarmatian era (II century BC – II century). Bronze tools, gold jewelry, bronze and iron weapons, ceramic dishes. Excavations were carried out in 2011 during the construction of new PS under the Expansion Project.

Glebovskoye-1

In 1997, in the construction area of the CPC Marine Terminal, archaeologists discovered traces of a medieval settlement 8 km west of Novorossiysk, at the foot of Glebovka Mountain. Remains of residential and agricultural facilities, a two-chamber oven, spindles, metal weapons, and ceramic amphoras were found. Radiocarbon analysis dates the finds to the XII–XIV centuries.

Sarayshyk

The small capital of the Golden Horde, then the capital of the Nogai Horde. It was built in the X century at the confluence of the Ural River into the Caspian Sea on the route of the Great Silk Road. Roman amphorae, weapons, coins and jewelry were found during the construction of the CPC oil pipeline crossing through the Urals at km 208–210.

Ancient settlement Aktobe-Laeti

197th km of the oil pipeline. Here, in the suburbs of Atyrau, traces of a settlement that existed in the XII-XV centuries and was mentioned in Genoese sailing directions were found. During excavations, catacombs were discovered, and in them — metal and glass products, as well as furnaces for their manufacture.

Saray Batu

The capital of the Golden Horde, founded in the XIII century at the mouth of the Volga by Batu Khan, 130 km upstream from modern Astrakhan. During the construction of the CPC oil pipeline crossing over the Volga, burials and traces of buildings were found.

PS Isatai
PS Atyrau
Atyrau
PS Astrakhan
A-PS-4A
PS Kurmangazy
A-PS-5A
Astrakhan
PS Tengiz
PS Komsomolskaya
PS-2

Bayshonas

On the 151–158 km of the route, burials with elements of decorations and tools dated to the III–II century BC were found.

Manjikins

During the laying of an oil pipeline in the Iki-Burulsky region of Kalmykia, a burial mound of the IV–III century BC was discovered. Ceramic altars and vessels, bronze jewelry and other finds belong to the Maykop culture.

CASPIAN SEA

KAZAKHSTAN

3d-sparrow/Shutterstock/FOTODOM, RedKoala/Shutterstock/FOTODOM

AUTHOR
PAVEL KRETOV

PATH OF COURAGE

60 YEARS AGO, THE USSR DECIDED TO BUILD A PIPELINE SYSTEM FOR TRANSPORTATION OF RAW HYDROCARBONS FROM THE WORLD'S LARGEST WEST SIBERIAN OIL AND GAS PROVINCE

Ivan Sapozhnikov/TASS

In 1959–1961, powerful fountains from exploration wells with a daily flow rate of 100–400 tons rewarded the expectations of geologists: there was a lot of oil in the vicinity of Shaim, Surgut and Nizhnevartovsk and it was not deep. As Academician Alexander Matveychuk wrote in his article "The First Million of Tyumen Oil", "The party and political leadership of the USSR at that time realized that hydrocarbon raw materials had become the dominant factor for the further development of the national economy".

At the first enlarged Shaimneft field in Siberia, builders quickly erected drilling rigs, production bases and residential complexes. At first, all the oil produced was transported by barges along the rivers to Omsk. But the possibilities of such transport were more than modest for daily production volumes, so the oil workers were looking forward to the commissioning of the Shaim-Tyumen pipeline.

THE PIPELINE SYSTEM BEING CREATED WAS OF A SHORT LENGTH – ONLY

426 KM

The Decree of the Council of Ministers of the USSR dated December 4, 1963 «On the organization of preparatory work for the industrial development of discovered oil and gas fields and on the further development of geological exploration in the Tyumen region» referred to the small Shaim-Sotnik oil pipeline. But in March 1964, Aleksey Kortunov, chairman of the State Production Committee for the Gas Industry of the USSR, enlarged the scale of the task. Paragraph 20 of the order refers to changing the Shaim-Sotnik pipeline and designing the Shaim-Tyumen oil pipeline instead. So this pipeline, along with the construction of oilfield facilities at the Ust-Balyk, Megion, Surgut and Shaim fields, was included in the list of the most important construction projects of the Soviet Union. The Komsomol organization of the Tyumen region also announced the construction as a top-priority and took patronage over it.

The construction of the pipeline started at the beginning of 1964 and was supposed to be completed in the middle of 1966, but, given the importance of developing Siberian deposits, the plans were shifted to 1965.

Although the pipeline system being created was of a short length – only 426 km, the builders who arrived in Western Siberia faced unprecedented difficulties: untouched taiga, harsh climate, merciless gnat. The picture was complemented by the lack of roads, a large number of long non-freezing swamps and such large rivers as the Tura, Tavda, Konda, Leva, Leushinka, Evra, Vona. It was required to build 64 crossings over small rivers, streams and ravines, railways and roads. Lay 151 km of plank-roads, deliver and take out over 50 thousand tons of pipes to the route, process about 3 million m^3 of soil, weld almost 60 thousand joints.

Work began on the simplest and most accessible for wheeled and caterpillar vehicles southern section of the route – from Tyumen to 267 km. In May 1964, three pipe welding bases were deployed here. Then, workers and northern Komsomol-youth landing troops went to the oncoming movement towards the «southerners».

«Komsomol volunteers» worked with great enthusiasm, but the pace of pipe deliveries left much to be desired. In 1964, only 20% of the plan for transporting pipe products along winter roads was fulfilled. The proposal of the specialists of the underwater technical work team helped to catch up with the schedule: to weld whips, knit 100x10 m rafts from them and tow them in the water. In the middle of summer, the first raft, having crossed almost 2 thousand km along the rivers, arrived in the village of Dalniy. Five more came after the first. In such an unusual way, the builders received 8.3 thousand tons of pipe-roll at their disposal.

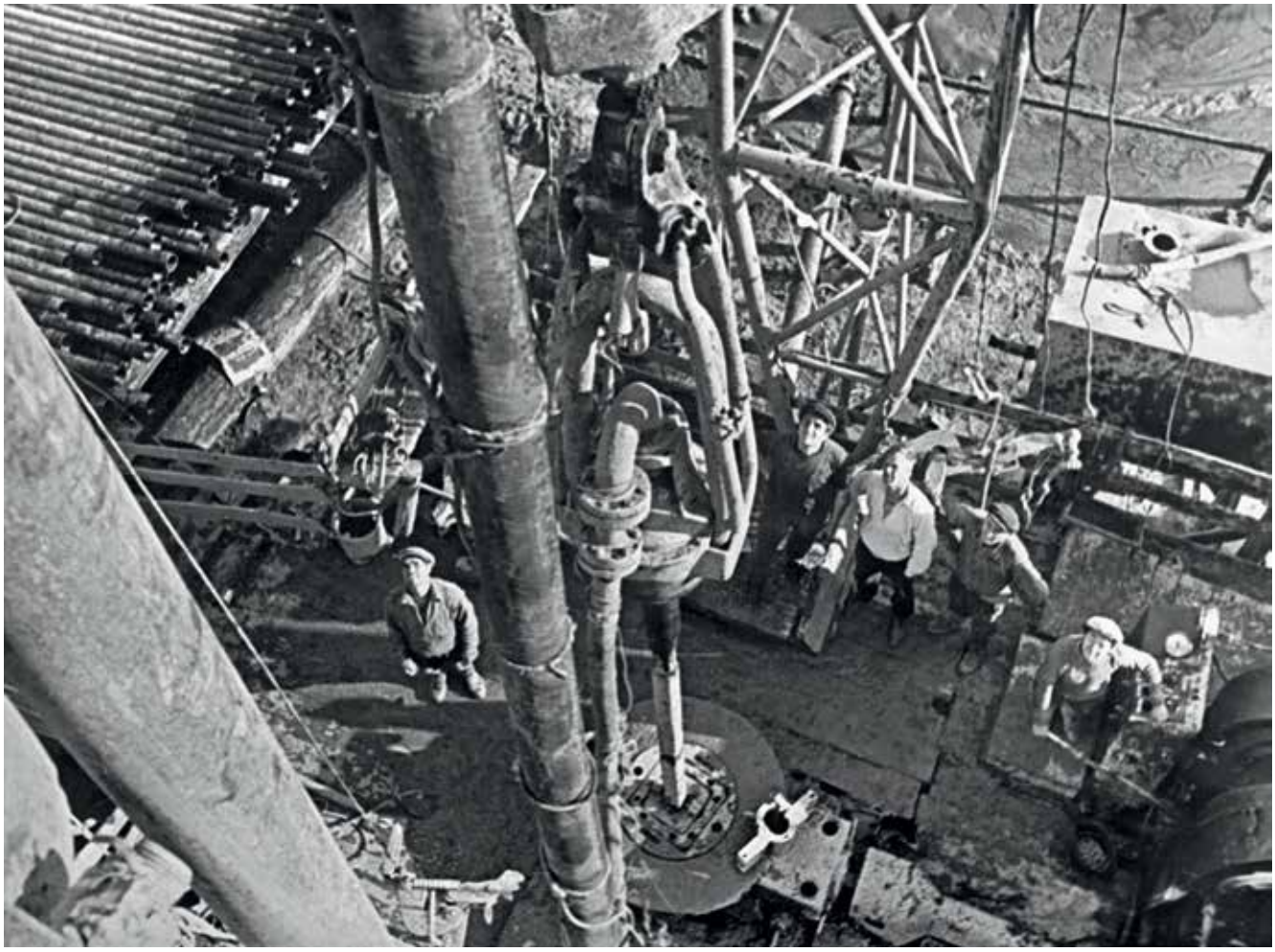
Provided by Municipal Cultural Institution "N.S. Tsekhnova Regional local history museum"

ONE MORE JUNCTION OF THE SHAIM-TYUMEN PIPELINE

By the end of the summer, the construction site had already involved a truly impressive resources: three welding and installation sections, three insulating and laying columns, two mechanized excavation sites. The concentration of resources made it possible to ensure a high rate of 1.5 km per day. However, the leaders of the construction of the oil pipeline understood that the greatest difficulties were still ahead in the northernmost sections: Kuminsky junction – Laut and Laut – Shaim.

Anticipating this, the construction headquarters ordered the construction of an additional railway line in the area of Kuminsky junction in order to organize the reception of 150 km of pipe-roll and various cargoes. The remaining 120 km of pipes from Tyumen were planned to be delivered to navigation next summer along the Ture, Tobol, Irtysh and Konde rivers.

With the cold, the entering of taiga and swamps unfolded along the entire



Skurikhin/RIA Novosti

DRILLING RIG AT THE SHAIM OIL FIELD. 1965

length of the route. Forcing the pace of advancement through non-freezing swamps, the construction management organized special units for freezing swamps and maintaining winter roads. The work switched to a round-the-clock mode: the engines were not turned off, the change of crews and crews took place literally on the move of special equipment. And this is in 45-degree frost!

When the special equipment ran into the swamp, heavy Mi-6 transport helicopters took to the air. For the first time in domestic practice, they transported by air links of pipes 36 m long. In just two weeks of operation of the «air bridge», rotorcraft delivered pipes for 20 km of the route. And in total, thanks to the aviators, 102 km of the oil pipeline were laid.

ON NOVEMBER 27, 1965, THE FINAL «RED JOINT» WAS WELDED, AND ON DECEMBER 21, SHAIM OIL CAME THROUGH THE PIPELINE TO TYUMEN

The builders could not stop impassable swamps even by tracked vehicles in the Ust-Akha region.

The most intense period at the construction site was the summer of 1965. Construction continued, tapping of block valves was in progress, hydrotesting began. The installation of the main pumping station and the Tyumen oil loading station progressed rapidly.

On November 27, 1965, the final «red joint» was welded, and on December 21, Shaim oil came through the pipeline to Tyumen, where tanks were already waiting for it at the railway station. The flask with the fossil «dominant of the development of the national economy» was brought to the celebratory podium by Yakov Poltoratsky, the foreman of the SU-13 installers. The Motherland highly appreciated his work with the honorary title of Hero of Socialist Labor.

The commissioning of the first Siberian main oil pipeline became the prologue to the further intensive development of the domestic pipeline system, by far the largest in the world.

AUTHOR
ILONA LATSUZHBA,
RECEPTIONIST, CPC-R

OBVERSE AND REVERSE

DOMESTIC TOURISM SEEMS TO BE SURVEYING A NEW ROUND OF POPULARITY. BUT AT THE SAME TIME THERE IS A CURIOUS PARADOX: THE NUMBER OF SITES YET NOT VISITED IS NOT DECREASING, BUT, ON THE VERSE, GROWING. LET'S TALK ABOUT SUCH IN KAZAKHSTAN AND THE RUSSIAN BLACK SEA REGION

GREEN BAZAAR

The covered market "Kok Bazaar" with an area of 20 thousand m^2 is included in the sightseeing tours of Almaty. One of the best markets in the region was founded in 1868. In 1875, according to the project of Ivan Kozell-Poklevsky, a Gostiny Dvor was erected here, in 1887 it was destroyed by an earthquake. In 1975, the market pavilions were united by a reinforced concrete building by architect Mark Pavlov with a reinforced earthquake-resistant frame. Thanks to the reconstruction of 2017, the Green Bazaar acquired its modern look.

Pikoso.kz/Shutterstock/FOTODOM

Today, more than 800 outlets of the market offer visitors the widest range of products, including meat, poultry, vegetables, fruits, pickles and much more. The main specialty is considered to be apples of the "Almaty Aport" variety, the actual peer of the Green Bazaar. In 1865, the "Aport Alexander" variety was brought to Almaty (then still Verny) and crossed with the local wild-growing Sievers apple tree to increase endurance. The result exceeded expectations: large red juicy apples gained worldwide fame, having visited the World Exhibition in Paris in 1900. In general, whoever has not been to the Green Bazaar has not seen Almaty.

AlexelA/Shutterstock/FOTODOM


Yuri Turkov/Shutterstock/FOTODOM

KAZAKH NATIONAL OPERA AND BALLET THEATER NAMED AFTER ABAY

Founded in 1934 and bearing the name of the founder of Kazakh written literature, the 793-seat theater is considered one of the main stages in the Eurasian space. The empire building of the theater in the center of Almaty is recognized as an architectural monument and is depicted on the banknote of 2 thousand tenge. The repertoire includes national and world classics (as a rule, operas are performed in the original language). The scenery and costumes are made at a high artistic level. Tickets are sold in the national online system "Tiketon", the cost varies from 1000 to 4000 tenge.

KORGALZHYN STATE NATURE RESERVE

One of the two nature reserves of Kazakhstan included in the UNESCO World Heritage List. The reserve with an area of 543,171 hectares is located 130 km southwest of Astana, on the migration route of migratory birds. Here, on the swampy shores of lakes Teniz and Korgalzhyn, 347 species of birds are found, 41 of them are included in the Red Book of Kazakhstan and 26 species — in the International Red Book. The protected flora includes 443 species of plants. The status of a strict nature reserve does not exclude excursions, and from April to September, tourists can see pink flamingos, curly pelicans, cranes, herons, swans, eagles and other birds in their natural habitat.

Yerbolat Shadrakhov/Shutterstock/FOTODOM

"GAZPROM LAURA"

Probably everyone knows about Sochi's Rosa Khutor, but here, for the 2014 Olympics, Gazprom also built the Laura ski and biathlon complex. Compared to the size of the "Khutor" everything here looks more compact. 23 slopes, 12 cross-country trails, 13 cable cars. Gazprom Laura is suitable for those who have started skiing for the first time, the slopes are not difficult. A daily ski pass will cost 4000 rubles, a children's pass will cost 2400 rubles, and you can ride a cable car for 3000 rubles. The Galaktika shopping and entertainment center, where there is a water park, bowling, an ice rink, a cinema and restaurants, is of particular value to the resort. Fans of other activities can visit the climbing wall, ride horses or quad bikes. Open all year round.

Danila Sivenkov/Shutterstock/FOTODOM

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ADLER AQUARIUM

I visit Sochi often, but the Sochi Discovery World Aquarium, built back in 2009, was a discovery for me. It is located in Adler, where the airport is. On the territory of 6000 m^2 there are 30 aquariums with a total volume of 5 million liters. In the first hall you will see more than 100 species of freshwater fish and turtles. In the second hall there are inhabitants of the deep sea: sharks, moray eels, jellyfish, stingrays, coral fish and seahorses. Visitors watch them moving through the 44-meter acrylic tunnel, but if you wish, you can dive with an instructor. The ticket costs 1100 rubles for adults and 600 for children, half an hour of diving will cost 6000, and for another 1000 they will make a movie about your underwater adventures. Days off at the aquarium — Monday and Tuesday.

TESLA MUSEUM

The Electric Museum of Nikola Tesla is located in the Sochi Olympic Park. Landmarks are a steel tower for wireless transmission of current and a white tent where they arrange interactive shows, after which any "D student" will fall in love with physics. Taming of plasma and reduction of objects, dancing with lightning and electric music, "cage of fear" and Megavolt show, a film about the life and discoveries of Nikola Tesla. Interesting and informative, not allowed with pacemakers, open every day, seven days a week, ticket costs 400 rubles.

Nina Zotina/RIA Novosti

PakulinSergei/Shutterstock/FOTODOM

NOVOAFONSKAYA CAVE

In 1981, part of the episodes of the three-part television movie The Adventures of Tom Sawyer was filmed in the Apsny hall of the Novoafonovskaya cave. A unique karst cavity with a volume of more than a million cubic meters was discovered in 1961 by the Abkhaz artist Givi Smyr. Since 1975, tourists have been allowed here, and they are delivered by underground train. Of the 11 halls of the cave, six are excursions, concerts are held periodically in one of them, in the other there is a lake. Scientists work in halls closed to tourists. Fabulous acoustics, impressive views, a unique ecosystem — all this clearly requires a separate publication, and preferably a photo essay.

RESTAURANT "GAGRIPSH"

The episodes of the films 'Winter Evening in Gagra" (1985) and "The Adventures of Prince Florizel"(1981) were filmed at the "Gagripsh" restaurant. The building with a huge clock on the facade, combining the Art Nouveau style and half — timbered design, attracted the founder of the Gagra resort, Prince of Oldenburg, at the World Exhibition in Paris. In 1902, the restaurant was dismantled in Norway, transported by sea to Gagra and reassembled. Here, on January 9, 1903, the official opening of the resort, which was then called the Gagra climatic station, took place. The restaurant overlooking the sea was loved by the imperial family, revolutionaries, writers. Little has changed here since the beginning of the 20th century, and the menu of European and Abkhazian cuisine even contains old recipes that still remember Their Highnesses.

SHELIAKIN MAKSIM/Shutterstock/FOTODOM

GEGSKY WATERFALL

At one time, not only promising actresses, but also the best cameramen dreamed of going to Gagra with Yakin. The most impressive "ersatz landscapes" were filmed here, in no way inferior to the originals that inspired the authors. So, for example, the fight between Sherlock Holmes and Professor Moriarty in 1980 was filmed in one day against the background of the Gegsky waterfall. It is located in the northern spurs of the Gagra Range at an altitude of 530 m above sea level, 6 km from the confluence of the Gega and Yupshara rivers. The icy water of the Gega River over 300 m passes through a karst cave and then falls into an abyss 70 meters deep. In addition to the episode described above, Maslennikov & Co filmed eight more scenes in Abkhazia, five of them in Pitsunda. The Geg waterfall, in addition to The Adventures of Sherlock Holmes and Dr. Watson, can also be seen in the films Sportloto-82, Riki-Tiki-Tavi, and also in the seven-episode TV show about Dato Tutashkhia.

Maria Krayukhina/Shutterstock/FOTODOM

INDIVIDUAL MOBILITY

BICYCLISTS, SCOOTERS, MONOCYCLISTS START THE SEASON IN SPRING. THERE WERE MANY FANS OF THESE TYPES OF TRANSPORT AMONG OUR COLLEAGUES, AND WE ASKED TO SHARE THE FRESH TRENDS OF THOSE WHO WE MANAGED TO CATCH

ALEXEY BARANOV,
TEAM HEAD, INFORMATION AND ANALYTICAL SYSTEMS

I go to work on a unicycle, I cover 12 km a day. I have been using this vehicle since 2021, the model has not changed yet – this is InMotion V10F. I took it as a universal tool for riding around the city and the region. I learned how to ride on videos on the Internet. The advantages of a unicycle over a segway, hoverboard, a gyro scooter and bicycle are undoubtedly its compactness and maneuverability. In the subway, for example, with all your desire, you can't create discomfort for anyone: a 20-kilogram device does not exceed the size of an ordinary briefcase.

The pleasure of moving here is of a very special nature: due to the fact that there is no steering wheel and other controls in front of your eyes, you feel like a hero of a fairy tale, who flies forward on his own. You can accelerate to 40 km/h, but as long as this speed is half that, you remain in the category of pedestrians and do not fall under the latest changes in traffic rules.

In the two years that have passed since the appearance of the unicycle, the market has not yet stabilized. First of all, it concerns the service. When the battery began to hold a charge worse, it was not possible to repair the unicycle under warranty. Armed with a soldering iron, I fixed everything myself. At the same time, there are now many proposals for tuning unicycles – basically, this is hydroprotection from puddles. Although in the rain you can ride it without any tuning.

IRINA AKHMETOVA,
ADMINISTRATIVE ASSISTANT

Where the distance exceeds 20 km, the bicycle has practically no competitors among the means of individual mobility. In this case, a folding bike can be used to overcome part of the route on the way to work and back, they will be allowed to take it to the subway.

The bike has a huge resource for tuning, making this vehicle lighter, faster, more comfortable. You can put tubeless tires, spokes, hubs, rims, choose a lighter upgraded fork (air-oil, or some other) and much more. Personally, I replaced the frame with a lighter aluminum frame two years ago. The carbon frame is even lighter, but it is fragile. In a city where there are a lot of all sorts of stone corners and curbs, there is always a risk of losing control, running into something and getting a crack.

A 40-kilometer bike ride is standard entertainment for me. The record is 170 km per day. There are so many forests, parks, reservoirs in the Moscow region that you can see something new on each route. The recent change in traffic rules has deprived cyclists of the opportunity to ride on motorways and highways. These are not only toll highways, but also ordinary suburban highways. But, given the abundance of other roads and paths, this does not affect freedom of movement.

During the season, which usually lasts until the first snow, you have time to visit a lot of places. Favorite places are the Uchinsk reservoir, Losiny Ostrov, VDNKh, the Gremyachiy Klyuch spring in the Sergiev Posad district. The road to the spring leads through a hill 81 m high, with an elevation angle of 3.5°. Under the wheels of sand and gravel, lifting requires a certain amount of effort. I did it on August 22, 2022. As a rule, it is better to leave such extreme sports at the end of the season, before that it is important to "roll out" well.

AUTHOR
PAVEL KRETOV

SPRING MARATHON

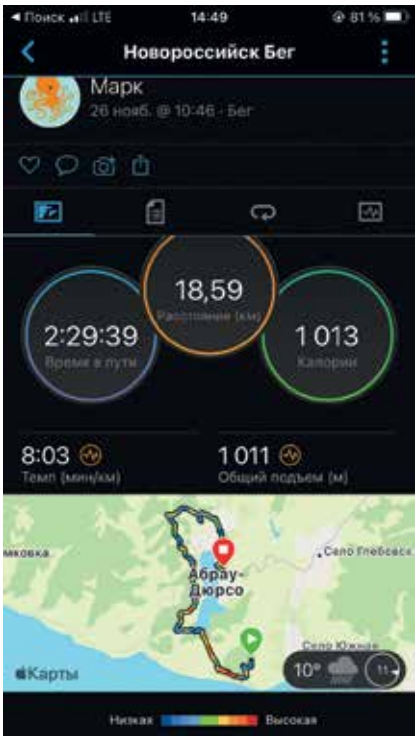
COLLEAGUES FROM NOVOROSSIYSK SHARE THEIR PASSION CALLED TRAILRUNNING

As a sport, trailrunning was officially recognized as an athletics discipline only in 2015, although its roots go back to ancient times. The first known cross-country runners were the ancient Greeks. Due to the fragmentation of civilization into separate city-polices on the Balkan Peninsula, there was no unified system of roads and stations for changing horses. Therefore, the news of victory or an important letter to the allies under the narrow mountain paths was delivered faster and more reliably not by a horseman, but by a well-trained warrior.

Thanks to the "father of history" Herodotus, we even know the name of one such messenger, at the beginning of the 5th century BC who ran about 240 km along the route Athens – Sparta and back to report the landing of the troops of the Persian king Darius on the mainland. With an answer from the Lacedaemonians, the Athenian Pheidippides returned, having spent 36 hours on the road in each direction.

In 1982, five Britons ran the same route, and the result of the best of them was 34 hours. A year later, under the auspices of the Greek Athletics Association, the first open international run was organized, called spartathlon. Since then, this competition has been held regularly, but unlike the marathon, it is organized only in Greece, and only in the historical area where, presumably, Pheidippides fled.

Unlike spartathlon, any country and territory where there are hills, mountains, deserts and forests can



KONSTANTIN LEUS

become a venue for trailrunning competitions. For example, since 2017 Novorossiysk has been hosting the Markoth Trail Ultramarathon, whose participants compete at distances of 13, 22, 46, 67 and 102 km.

"In 2020, when I felt that I lacked movement due to the pandemic, I bought a slot for the Markoth Trail Ultramarathon for the shortest distance to test my strength", recalls Operations and Repairs Engineer Konstantin Leus. "It was very difficult: I walked along the route rather than ran, but I liked it".

Of course, if all the previous time you spent your leisure time only on rhythmic turning from side to side on the couch, and at the age of 30 you suddenly wanted to imagine yourself as an athlete, then this sport is definitely not for you, it's safer for your health to start with jogging in the city or on stadium, that is, on a flat surface. Konstantin, from childhood, was fond of basketball and weightlifting. He also introduced his colleague to trailrunning, Mark Skrylnikov, Senior Engineer, Oil and Gas Pipeline Operations.

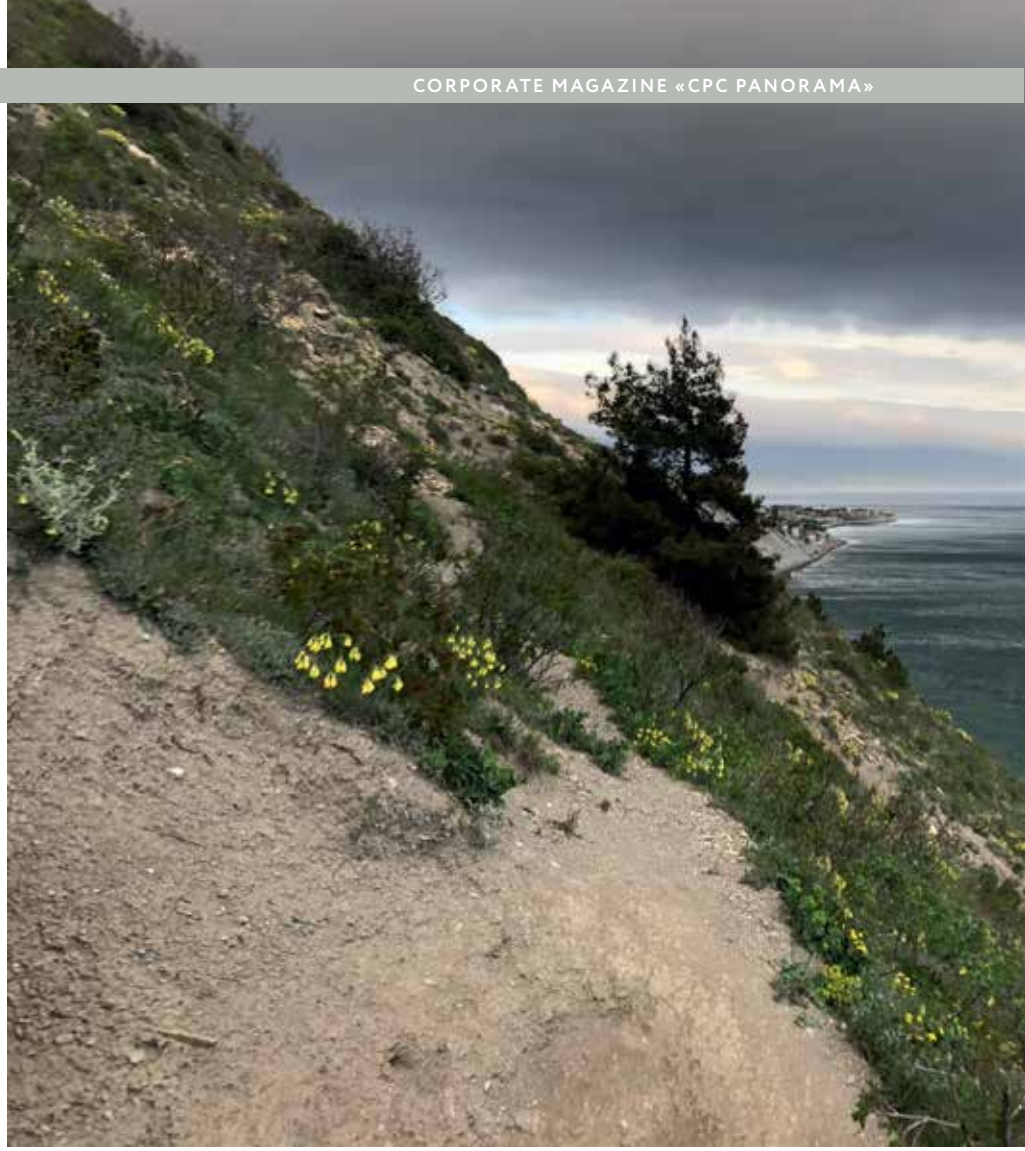
"I used to run long distances as a child, but I always preferred team sports, especially football", Mark recalls. "From the age of six I was seriously engaged in the section at the Chernomorets football club. At the same time, running in a circle at the central stadium Trud, where our school physical education lessons took place, seemed to me too monotonous and uninteresting".

THE MESSENGER RAN ALONG THE ROUTE ATHENS – SPARTA

240 KM

AND THE SAME AMOUNT BACK

MARK SKRYLNIKOV



Konstantin dissuaded Mark that running was boring and monotonous. Trailrunning is always a real adventure, each new start is different from the previous one. Open locations, scenic views.

"Today in Russia there are a lot of opportunities for trailrunning", Konstantin Leus is convinced. «In the middle lane there are routes through the swamps. Mountain competitions in Dagestan and Khibiny are widely known. White Bride Ultra took place in Gelendzhik last week, where a girl from our running club ran 128 km in 28 hours".

But this, of course, is the achievement of ultra-professionals. For a distance that an amateur runs in six minutes, an athlete who, according to science, monitors his diet and regime, will need a maximum of five. On a climb or descent where an untrained runner is bound to step into a walk, a trained trail runner won't even slow down.

"I train by running along the embankments in the city", Konstantin reveals the secrets. "The route

is approximately 10 km. The ascent is small: only 70 m, but long".

"I draw my own route: first along the ridge to the Shirokaya balka, then along the bank of Myskhako. It turns out 18 km", adds Mark.

Having chosen a new sports hobby, it is always useful to listen to the advice of experienced people. For example, our colleagues do not recommend purchasing specialized clothing, shoes and equipment before the first experience of participation in real competitions is gained.

"I didn't listen to Konstantin, I bought everything that I considered the best and lost", Mark smiles. "It turned out that the shoes needed are not "the best", but suitable for the conditions of a particular route. Depends on many factors: season, soil, terrain, presence of fords".

Many nuances of the equipment are purely individual. If you consume a lot of fluids, you can't do without a backpack. In other cases, it is enough to have a special vest with pockets, in which the competitor must put a special first aid kit with hydrogen peroxide, ointments and adhesive plaster, a waterproof flashlight, a whistle, a thermal blanket and, of course, a mobile phone.

In the heat, when there is a temptation to drink more water, we must remember: excessive sweating disrupts the water-salt balance in the body. The use of special salt tablets helps to replenish the consumption of electrolytes in a timely manner.

And one more piece of advice worth listening to. If the competitions are held in the highlands somewhere in Arkhyz, then it is better to arrive in advance in order to undergo a full acclimatization. No wonder professionals organize regular gatherings in such places.

HAUTE CONFISERIE

AS IT TURNED OUT IN PAST CPC PANORAMA ISSUES, IT IS QUITE POSSIBLE TO BAKE BREAD AND MAKE CHEESE ON YOUR OWN. BUT, AS YOU KNOW, THERE IS NO LIMIT TO PERFECTION, AND THIS TIME COLLEAGUES SHARE THE SECRETS OF COOKING SOME MORE EXQUISITE DISHES. THE EDITORS CHECKED: EVERYTHING IS VERY TASTY!

TIRAMISU

The name of the dessert is made up of three Italian words: tira, mi, su, the correct translation is "Cheer me up." Whip cream, add mascarpone and 1 tablespoon of powdered sugar. Continue whipping until dense peaks. Add 2 teaspoons of sugar to the prepared coffee, cool completely, soak the coffee cake, or dip the Savoiardi tubes in coffee, put 1/2 of the whipped cream, cover with the second cake on top, soak the top coffee cake, lay out the remaining cream. Sprinkle cocoa and grated chocolate on top through a sieve. Put in the refrigerator for 5–6 hours to impregnate the biscuit and stabilize the cream.

Maria Vasina,
Senior Administrative Assistant

INGREDIENTS:
Cookies – 250 g
(or thin biscuit cakes 2 pcs..)
Mascarpone cheese – 250 g
Cream 35% – 500 g
Ground coffee – 1 cup
Bitter chocolate – 50 g
Cocoa powder – 1 tablespoon
Powdered sugar – 1 ablespoon

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CROISSANTS

The dough is kneaded from flour with the addition of sugar, salt, dry yeast activated with warm water, warm milk, butter (100 g). Placed in the refrigerator for 4 hours. 250 g of butter is rolled into a thin layer in a 20×20 cm parchment envelope and also cooled. The dough is rolled into a rectangle 40×20 cm. The oil is released from parchment, laid out on the dough. The rectangle is folded in half, it turns out 2 layers of dough and a layer of butter in the middle. With intermediate hourly cooling, the dough is rolled out and folded into 12 layers of butter and 24 layers of dough for a total thickness of about 5 mm. It is cut into triangles with a base of 8 cm. An incision is made at the base. Slightly stretching the base around the corners, you need to twist the dough into a spiral. Another 1.5 hours is given to lift the dough. The final touch before baking is to beat a raw egg and grease the surface. Bake at 200°C for 10 minutes, then lower the temperature to 185°C and cook for another 10 minutes.

INGREDIENTS FOR 12 CROISSANTS:
Flour – 500 g
Salt – 12 g
Dry yeast – 12 g
Sugar – 55 g
Water – 150 ml
Milk – 100 ml
Butter – 350 g
Chicken egg – 1 pc

Andrey Greshnikov,
Senior Telecom Engineer

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