

# ENVIRONMENTAL PROTECTION

THE OCCUPATIONAL HEALTH, SAFETY, ENVIRONMENTAL PROTECTION, SECURITY AND SOCIAL RESPONSIBILITY POLICY OF ZARUBEZHNEFT JSC DEFINES ECOLOGICAL WELL-BEING AS THE BASIS FOR THE COMPANY'S ECONOMIC STABILITY.

The Occupational Health, Safety, Environmental Protection, Security and Social Responsibility Policy of Zarubezhneft JSC defines ecological well-being as the basis for the Company's economic stability.

In 2019, a supervision audit of the CC of Zarubezhneft JSC, JC RUSVIETPETRO LLC, ZARUBEZHNEFT-Dobycha Kharyaga LLC, RMNTK Nefteotdacha JSC, Zarubezhneftestroyontazh LLC, and Modriča Motor Oil Plant A.D. was successfully conducted to confirm the Certification for compliance to international standard ISO 14001:2015. The subsidiaries Zarubezhneft-Dobycha Samara LLC, Ulyanovskneftegaz LLC, Orenburgnefteotdacha JSC, and Giprovostokneft JSC were introduced into the HSE Management System certification perimeter.

In 2019, the subsidiaries of Zarubezhneft Group performing their production activities in the Arctic zone of the Russian Federation (ZARUBEZHNEFT-Dobycha Kharyaga LLC and JC RUSVIETPETRO LLC) continued working on biodiversity preservation as per the approved Programs. In 2019, ZARUBEZHNEFT-Dobycha Kharyaga LLC updated the Program of Biological Diversity Preservation (BDP) at the Kharyaga licensed site based on inventory of biota and identification of the species that are indicators of the sustainable state of ecosystems of the Kharyaga field. Works under the BDP Program are scheduled for 2020-2021. Also,

at the end of 2019, a Cooperation Agreement was signed between the Ministry of Natural Resources and Environment of the Russian Federation and Zarubezhneft JSC, providing for joint activities under the federal project on Biodiversity Preservation and Development of Ecotourism in the context of the Ecology National Project.

Caring for the Far North's fragile ecosystem has traditionally been one of the Company's priorities: in 2019, JC RUSVIETPETRO LLC released about a thousand juvenile fish of valuable species into the Usa River (the Pechora River basin). Since 2014, more than 801 thousand juvenile fish of valuable species have been released into the Pechora River basin due to the efforts of JC RUSVIETPETRO LLC.

Starting from 2014, Zarubezhneft JSC has undergone an independent Ecological Openness assessment as per the World Wildlife Fund (WWF) rating criteria. Among the 20 largest oil and gas companies, Zarubezhneft JSC took second place in 2019, maintaining its position from the previous year. The nomination organizers noted Zarubezhneft JSC's great work in preparing and carrying out tabletop exercises complicated by winter period conditions, with the involvement of the general public, as well as the Company's initiative of biodiversity preservation programs that will become mandatory in the future.

In accordance with the Standard Procedure for Search and Evaluation of New Projects, the Company pays special attention to environmental aspects and environmental risk evaluation. All projects undergo Environmental Audit, the main criterion of which is the absence of any nature preserves within the contract area. During the project, environmental impact is evaluated and measures are developed to reduce fragmentation of landscapes and the size of the disrupted territories.

Zarubezhneft JSC has uniform HSE requirements to contractor organizations. The regulations adopted within the Company establish similar requirements to compliance with environmental standard norms both by the contractors operating within the Company and Zarubezhneft JSC's subsidiaries. Collecting mushrooms and berries, hunting and fishing is prohibited in the area where the Company implements its projects.

On a monthly basis, Zarubezhneft Group's subsidiaries run controls of the integrity of intrafield oil pipelines, which is one of the priorities of the Environmental Policy of the Company.

In 2019, the level of current financing of environmental protection activities in the subsidiaries located in the Russian Federation amounted to about 218.04 MM rubles, which is significantly higher than in 2018.

One of the most important environmental challenges that the Company faces is minimizing the effects of drilling waste through their neutralization and use, followed by elimination of sludge pits. In 2019, two drilling fluid pits were reclaimed. There are no oil-contaminated soils on Zarubezhneft Group's balance sheet.

In general, regular measurements of the air environment, soil and snow, surface water and bottom sediments were carried out on the territory of all licensed sites of Zarubezhneft Group's enterprises, as part of local environmental control and industrial environmental management.

Observation data are compared with the background values of natural indicators. During the reporting period, the maximum permissible concentrations (MPC) in the territory of the Russian Federation were not exceeded.

Implementation of the Gas Program for rational use of associated petroleum gas (APG) for 2019–2023 was a priority of the Zarubezhneft Group in 2019.

Owing to activities completed as part of the Gas Program of 2019, use of APG for our own needs for heat and electric energy generation has increased. The volume of production and use of APG is calculated based on readings

of gas metering units. The level of APG value-added use in the Russian segment of the Group (JV RUSVIETPETRO LLC, Zarubezhneft-Dobycha Samara within ONO and UNG) in 2019 was 92.5%, which is higher than the planned indicators embodied in the Gas Program for 2019 (actual in 2018 – 87.5%, planned for 2019 – 92.0%).

### Gross atmospheric emissions for Zarubezhneft Group of Companies in the “Upstream” segment for 2015-2019, thousand tons

Air emissions	2016	2017	2018	2019	+/-
Solids	0.865	0.549	0.437	0.280	-0.157
Sulfur dioxide	3.309	7.507	6.909	6.841	-0.068
Carbon oxide	9.697	8.874	7.914	6.375	-1.539
Nitrogen oxide	1.138	1.391	1.213	1.225	0.012
Hydrocarbons (without volatile organic compounds)	8.952	10.115	8.804	7.015	-1.789
Volatile organic compounds	3.337	4.069	3.900	3.251	-0.649
Other gaseous and liquid	0.186	-	-	-	-
<b>Gross emission of harmful substances into the atmosphere</b>	<b>27.48</b>	<b>32.51</b>	<b>29.18</b>	<b>24.99</b>	<b>-4.19</b>

### Production and use of associated petroleum gas by the Zarubezhneft Group of Companies in 2019 (the Russian segment), MM m<sup>3</sup>

Enterprise	APG production	APG use for own needs	APG usage %
JC RUSVIETPETRO LLC	120.80	111.54	92.4
Orenburgnefteotdacha JSC	2.37	2.35	99.4
Ulyanovskneftegaz LLC	0.53	0.50	94.4
<b>TOTAL</b>	<b>123.70</b>	<b>114.39</b>	<b>92.5</b>

The associated petroleum gas produced at the Kharyaga field is sour, which hinders its value-added use. According to the project for facilities construction at the Kharyaga field, ZARUBEZHNEFT-Dobycha Kharyaga LLC plans to proceed with commissioning of gas desulfurization equipment, a gas-turbine plant, and necessary infrastructure for purified gas compression. Following the results of 2019, the level of APG use in ZARUBEZHNEFT-Dobycha Kharyaga LLC amounted to 41.2%, with target indicators of 32.4%. The level of use increased due to additional measures for advance deliveries of associated gas to the gas transportation network of LUKOIL-Komi LLC starting from June 6, 2019 and due to the scaling up of electricity generation using APG. By 2023, we plan to reach 95%.

In 2019, Zarubezhneft JSC took part in the pilot project of the Federal Service for Supervision of Natural Resource Usage on issuing all-in environmental permits, as part of the federal project "Implementation of the Best Available Technologies" in the context of the Ecology National Project. Following the results of this project, ZARUBEZHNEFT-Dobycha Kharyaga LLC (subsidiary of Zarubezhneft JSC) received a positive conclusion by the ecological expert commission and became the first company among the Russian companies to receive an all-in environmental permit.

As part of automation of environmental protection processes in the group of companies belonging to the Geological exploration and production segment, a solution for environmental indicators accounting was implemented in the ECOURS automated control system (ACS).

### SPECIFIC INDICATORS IN ENVIRONMENTAL PRESERVATION FOR THE GROUP IN THE RUSSIAN FEDERATION

Implementing the gas program in 2019 enabled us to cut the specific indicators of pollutants emissions. They decreased

from 6.09 to 5.13 tons per thousand tons of oil produced in comparison to 2018, as well as specific emissions of greenhouse gases, from 0.17 thousand tons of CO<sub>2</sub> equivalent per thousand tons of oil produced to 0.16 thousand tons of CO<sub>2</sub> equivalent per one ton of oil produced.

In 2019, drilling volumes decreased as compared to 2018, which led to a decrease in the drilling waste generated at the fields of JC RUSVIETPETRO LLC and ZARUBEZHNEFT-Dobycha Kharyaga LLC. Specific indicators of waste generation decreased from 7.98 tons per 1 thousand tons of oil in 2018 to 4.5 tons per 1 thousand tons of oil in 2019. In terms of the composition of the waste, more than 90% by weight is waste of hazard class IV, i. e. sludge. As per the Company's current internal regulations, all sludge was processed to inert material. In 2019, a slight increase (2%) in water consumption was associated with a decrease in reservoir pressure during field development at ZARUBEZHNEFT-Dobycha Kharyaga LLC block.

### GREENHOUSE GAS EMISSIONS DECREASE

Zarubezhneft JSC considers the entry into force of the Kyoto Protocol to be an important step towards expanding the efficient use of associated gases. The mechanism of the Joint Implementation Projects (JIP) on Greenhouse Gas Reduction

provided by the Kyoto Protocol to the United Nations Framework Convention on Climate Change remains one of the most serious incentives for implementation of associated petroleum gas disposal projects and other projects aimed at reducing greenhouse gas emissions.

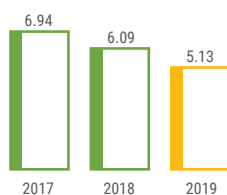
As per the Guidelines and Instructions for Quantitative Calculation of Volume of Greenhouse Gas Emissions by Enterprises Conducting their Business or Other Activities in the Russian Federation (approved by Order of the Ministry of Natural Resources and Environment of the Russian Federation No. 300 dated June 30, 2015) registered with the Ministry of Justice of the Russian Federation on December 15, 2015, registration No. 40098, Zarubezhneft JSC determined the atmospheric greenhouse gas emission volume for 2019 as a result of the production activities of the oil-producing enterprises.

Investments in fixed assets allocated for environmental protection in 2019 are associated with the scheduled construction of a waste landfill at JC RUSVIETPETRO LLC block. The costs of other environmental protection measures (necessary scheduled maintenance of water treatment systems, costs of environmental monitoring in terms of implementation of Biodiversity Preservation Programs) are shown in the table.

#### Air emissions,

t/tous. t of oil

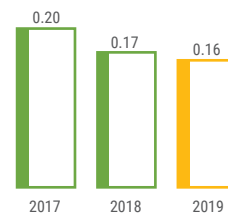
**-16 %**



#### GHG emissions in the Russian Federation,

thous. t/thous. t of oil

**-6 %**



Investment into fixed assets was reduced in 2019 due to the end of construction of the waste landfill at JC RUSVIETPETRO LLC block in 2018.

## INTERACTION WITH THE STAKEHOLDERS

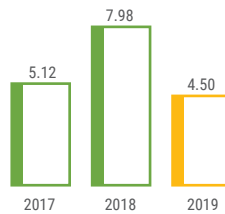
Zarubezhneft JSC strives for interaction with all stakeholders to maintain and establish constructive relations during projects implementation.

Since 2009, the cooperation agreement between JC RUSVIETPETRO LLC and the Administration of the Nenets Autonomous Area has been in force regarding interaction with indigenous minorities of the North. Since 2017, the Guidelines on Conduct in the Territories of Traditional Use of Natural Resources by Indigenous Minorities of the North have been in force at ZARUBEZHNEFT-Dobycha Kharyaga LLC.

On August 6, tabletop exercises (TE) were held at the Kharyaga field to check the readiness of ZARUBEZHNEFT-Dobycha Kharyaga LLC's non-professional

## Waste generation, t/thous. t

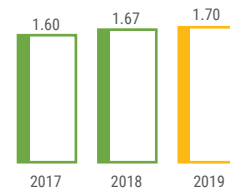
**-3.5**



emergency response team (NPERT) and to train the field services groups in containing and liquidating a conditional oil spill as a result of depressurization of the export pipeline at segment "Well Cluster 108 – Head Oil Gathering Plant". More than 50 persons and 10 units of special-purpose vehicles participated in the tabletop exercises. The Company clearly demonstrated its commitment to minimizing the risk of oil spills and protecting the environment. Among those invited there were representatives of the Reindeer Herders Union of the Nenets Autonomous Area and the regional social movement "Yasavey Association of the Nenets People".

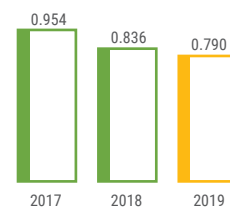
## Water intake, thous. t/thous. t of oil

**+2 %**



## Dynamics of GHG emissions, MM t of CO<sub>2</sub> equivalent

**-6 %**



Due to implementation of the gas program, the volume of emissions in 2019 amounted to about 0.79 MM t.o.e of CO<sub>2</sub> equivalent, which is 6% lower than last year.

## Environmental protection expenses for 2015–2019, MM RUB

Investments	2015	2016	2017	2018	2019	+/-
Investments in fixed capital for environmental protection	41.36	97.80	270.22	228.21	60.30	-167.91
Charges for adverse impact on the environmental	19.89	27.28	28.51	20.38	17.30	-3.08
Imposed penalties for the environmental pollution	0.94	0.09	0.32	0.51	0.94	0.43
Current environmental protection costs, including:	196.95	142.63	154.79	163.80	218.04	54.24
• Water bodies protection	3.00	4.58	7.68	23.00	10.31	-12.69
• Air protection	1.58	1.65	3.50	3.70	7.72	
• Protection of land from industrial waste	155.00	111.66	131.52	118.90	181.70	62.80
• Land reclamation	31.19	12.99	12.09	17.40	18.31	
• Other environmental protection activities	6.18	11.75	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>259.14</b>	<b>267.80</b>	<b>453.84</b>	<b>412.90</b>	<b>296.58</b>	<b>-116.32</b>