

Oil spills

For the third consecutive year, the number of oil and petroleum product spills in LUKOIL Group entities declined as a result of systemic measures carried out to improve the reliability of pipeline transport. In 2018 this indicator

declined significantly compared to 2017. In four cases, contractors and third parties (unauthorized tappings) were responsible for accidents with environmental consequences.

The Company's oil spill response system is able to localize spills quickly, eliminate the damage caused by accidents, and rehabilitate contaminated areas.



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Our goal: stabilization and reduction of the pipeline transport accident rate¹.

Volume of spilled oil and oil products in accidents involving environmental damage

	2016	2017	2018
Volume of oil and oil products spilled in accidents, thousand tons	0.26	0.22	0.032
Specific coefficient of spills (kg of spilled oil and oil products per thousand tons of extracted oil and gas condensate)	3.1	2.7	0.4

Notes. The specific coefficient is calculated based on the volume of oil and gas condensate production in Russia (net of the share in related organizations).

Management system

The Company has built an effective system for managing the reliability of field and main pipelines², based on the requirements of applicable laws and federal rules and regulations, as well as corporate documents.

The Company's policy on improving the reliability of pipeline transport is established by Federal Law FZ-116 "On the Industrial Safety of Hazardous Production Facilities," federal regulations, and the industrial safety rules "Rules for the Safe Operation of In-Field Pipelines" (approved by Rostekhnadzor Order No. 515 dated November 30, 2017), and corporate bylaws (STO LUKOIL 1.19.1-2012; 1.19.2-2013 and 1.19.3-2013).

The system covers all management levels, from senior management to specialized services in LUKOIL Group entities. The individuals responsible for the safe operation of pipeline transport facilities, performing timely technical diagnostics, and with industrial safety expertise are appointed by respective orders for each entity. Responsible individuals in this area also include the experts and head of the PJSC LUKOIL Improvement of the Oilfield Pipe and Tubing Reliability Network Group (hereinafter, the Network Group).

The management system, as well as methods for improving the reliability of pipelines, are regularly improved. A key

source of expertise is the activity of the Network Group, which forms a structural element within the Corporate Knowledge Management System.

Each Russian oil and gas producing organization implements an investment program related to the renovation and technical re-equipment of pipeline transport facilities. In order to influence the main factors that affect the safe operation of pipelines, objectives and planned quantitative indicators are determined for each reporting year, as well as for the medium term.

Improving the reliability of pipelines

An integrated approach forms the basis for improving the operational reliability of pipelines in PJSC LUKOIL. Main measures include:

- Pipeline maintenance and repairs
- Overhauls of field and main pipelines
- Appraisals of industrial safety and technical diagnostics
- Renovation of field and main pipelines, including corrosion-resistant pipelines
- Inhibitory and electrochemical protection to ensure the operation and extend the service life of pipelines

In 2018, almost half of pipeline renovation activities were carried out in West Siberia, as this region accounts for 44% of pipelines.

Priorities³ when it comes to implementing the concept of enhancing the operational reliability of pipelines include: inhibition, the use of non-metallic pipelines, and

¹ The goal was approved in the work plan of the PJSC LUKOIL Improvement of the Oilfield Pipe and Tubing Reliability Network Group dated January 25, 2019.

² The information contained in this section refers to the Russian entities of LUKOIL Group.

³ Priorities are determined in accordance with Federal Law No. 22-FZ dated March 4, 2013 "On the Industrial Safety of Hazardous Production Facilities," which sets out the classification of pipelines into hazard classes.